THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, MARCH, 1848. No. 3.

CULTURE OF INDIAN CORN.

EDITORS OF THE CULTIVATOR—It must be apparent to every one, that the aggregate value of the Corn Crop is immense to our country, and as almost every cultivator of the soil, throughout all its varied climate, and on all its variety of soils, is a grower of this crop to a greater or less extent, it becomes a matter of importance that it should be managed to the best advantage. I know of no better way to arrive at the desired result than the practical experience of successful corn-growers, made public through the columns of the agricultural press. We may all learn something from one another; indeed I never had a hired man even, in my life, however ignorant, that had not a way of his own of doing *something* from which I obtained a new and profitable idea. These considerations must be my apology for any apparent egotism in the frequent use of the personal pronoun in this communication.

I do not expect to add any thing new in information upon my present subject, which has been so often and so ably handled by others before me, but simply to show by what process I have been successful in raising much larger crops of corn to the acre than would be considered an average yield in this section, at least. The *average* yield of my corn crop, on 8 to 12 acres annually, has not fallen so low as 60 bushels per acre in 10 years, while in the more favorable seasons and on my best lands, it will come up to 80 to 90 bushels per acre. It is proper also to state, that some of the fields would not cut 500 lbs. of hay to the acre 10 years ago.

The land intended for corn is always broken up from 6 to 9 inches deep, varying with the quality of the soil, late in the fall, in order to that perfect pulverization of the soil which the frost of winter contributes so essentially to secure. The plowing is performed with great care and precision. No baulks—no crooked or imperfectly turned furrows are at all allowed, but the whole soil to the required depth is turned over. I have been troubled to find plows that do good work in a *deep* furrow—the Centre Draft and Eagle No. 2, a cut and description of which is given in the April number, vol. IV, of the Cultivator, turns a perfect furrow 8, 9 or 10 inches deep.

The heaps of compost manure are made up on this land in August or after, beds being plowed up to receive them. These heaps are ranged at convenient distances to load into the cart in the spring, and spread on the land with the best economy of travel, and contain 30 to 40 loads each, which is the quantity usually applied to the acre. Thirty-five to forty bushels is called a load. In the spring the manure is laid on the land in small heaps; the rows of heaps about four paces apart, and the heaps in the rows a little less distance apart, because a given number of loads, fine manure particularly, can be spread with more ease and expedition by making more heaps of a load, and placing them near together, than by following the more common practice of making larger heaps wider apart.

The harrow, going twice in a place, is started as soon as the workmen commence spreading the manure, in order that it shall be immediately incorporated with the soil without the loss of its valuable properties by evaporation, and also to divide and pulverize the soil above the sod, so that the plow afterwards may be used in a light furrow without disturbing it. Great improvements have been made in harrows by constructing them in two parts, connected together with hinges—the play, up or down, upon the hinges of either half, enables the harrow to adjust itself to the surface of the land in all places; and, whether smooth or uneven, it will always hug down close, and "keep digging." No farmer who has ever used a hinge harrow would be without one for five times the cost of making. When the harrowing is completed, the plow, with a sharp point, and a roller on the beam guaged to the proper depth, covers the manure 3 to 4 inches, which, after a trial of all ways, I consider about the right depth for fine compost.

The land is then furrowed out as nearly north and south as the shape and surface of the field will admit, and also east and west, the rows being 3½ feet apart each way. I prefer this distance to planting nearer. In my earlier farming operations, I used to plant corn considerably nearer both ways, of course growing a greater number of stalks and ears to the acre. In a favorable season, as to moisture, probably a few more bushels may be obtained by closer planting; but in offset the labor is also considerably increased. There are more hills to plant and hoe, and the ears being usually much smaller, the labor of husking a given number of bushels is greater, and no man can husk small ears and "nubbins" as fast as large ones. Besides, I find by actual experiment, that a closely planted field will not stand a drouth nearly as long as a field planted wider apart. Every stalk requires its due proportion of moisture from the earth in order to carry the ear of corn to full perfection, and of course the greater the number of stalks to the acre, the greater the draft upon the soil for moisture. In planting on a scale of 8 to 12 acres, therefore, I go for more space between the hills, notwithstanding there has been much said in favor of *shading the ground* by close planting, to prevent the effects of drouth. It is of considerable importance to have straight rows both ways, the use of the horse and cultivator being much more effective in this case than in crooked rows; besides, no farmer having a spark of honest pride, wishes to gaze all summer at so unsightly

an object as crooked corn rows, or expose the same to the gaze of others.

In planting the corn, which is a nice operation, care is used to scatter it well in the hill, putting in 6 to 8 kernels. I always direct the planters to occupy 8 to 12 inches square with each hill. This may appear a small matter to some, but it is a fact that corn planted thus will ear heavier, and there will be more stalks bearing two good ears, than if the common practice of tumbling the corn into the hill at hap-hazard is pursued. Indeed one could better afford to pay a man two dollars a day to plant corn in the way I have recommended, than the common price, planted in the common way. The corn is covered at least 3 inches deep in sandy and gravelly soils, for two reasons. In this section of country we frequently have late spring frosts which nip the corn after it is up, and if covered but slightly the vitality of the tender plant is often destroyed by freezing down to the roots, whereas if covered 3 inches deep, no permanent injury is done. Again, we sometimes have dry weather about planting time, and if the earth drys down to the corn after it has sprouted, it may not come up at all; if it does it will be a long time about it, and at the end of three weeks will not be nearly as vigorous as that planted deeper. The seed is planted dry. I have tried a variety of steeps for seed corn, but have settled down to the impression that it is as well planted dry as any way. The most effectual "scare-crow" I have ever found, is a line of white twine strung round the field, and supported by long stakes.

In working the corn after it is up, the main dependance is upon the horse and cultivator. The construction of many of the cultivators in use is faulty. The upper part of the tooth is so short, and the frame work in consequence is brought so near the ground, that the implement goes bobbing about over the top of the weeds, clogging up with every impediment it meets—the weeds of course are not cut off or rooted up in a thorough or desirable manner, although I grant they are somewhat *mangled*. In a future communication I may give a drawing and description of a cultivator, made at my suggestion, by an ingenious blacksmith in this place, which is not liable to the above objections. At weeding time the horse and cultivator pass through the rows both ways, perfectly pulverizing and mellowing the soil, and as the rows are *always straight*, the soil is worked up close to the hills each way, rendering the labor of weeding with the hoe comparatively light. The corn is again worked both ways with the horse and cultivator at the second hoeing, the feeble stalks are pulled out, leaving 4 to 6 standing in a hill, and a broad, *flat* hill made. I find it cheaper for me, so far as labor is concerned, to earth up a little than to hoe perfectly level, and the hills being made broad and flat, it is, for anything I can discover, equally as well for the corn.

I never hoe but twice. Having plowed the land the previous autumn, nothing green started up before the winter set in, and the frost immediately following, the grass roots were killed. In the spring the land was well harrowed and plowed above the sod; there were no seeds of weeds in the manure, it being well fermented compost, and thus the work of the season was in a great measure *done* before the seed was planted. After the second hoeing the corn has the entire occupation of the ground, no further trouble being experienced from weeds of any kind. The thorough working of the land before planting, and also by the use of the horse and cultivator through straight rows *both ways*, at the first and second hoeing, has the further advantage of bringing the corn along through the fore part of the season with great rapidity, which is of essential importance, particularly in our northern latitudes.

There is no variety of corn that is not either improved or deteriorated by the manner in which the seed is selected. As soon as the earliest ears are thoroughly glazed, I go over the field, selecting those for seed that are early and vigorous, and from stalks producing *two good* ears. The corn is immediately braided up and hung in a dry, airy place. I have a kind of very long-eared, eight-rowed corn, which I have planted for several years, selecting the seed in the field each year in the way described, and which will yield a quarter more, the quality and cultivation of the land being the same, than it would when I began raising it—the corn is also at least ten days earlier in ripening. At first it was difficult to find double eared stalks, but now, it would seem to an observer in passing over the field, that a large proportion of the stalks produce twin ears measuring, the two together, 24 to 26 inches in length; many of the single ears will measure 14 or 15 inches long. Of course no kind of corn can produce to any extent, two ears upon a stalk, of this length, unless the land and cultivation are both good. It is to be hoped there is "a good time coming," when no land will be planted with this luxuriant grain that is not good, or *made good*, by the liberal management of its proprietor.

As my communication is already too long, I will say nothing at present of the various modes of harvesting the crop; perhaps, at some future time, I may do so, and if I should my remarks will show the results of some practical experiments which I have instituted.

F. HOLBROOK.

Brattleboro, Vt., Dec. 14, 1847.

The Farmer's Song.

My sturdy sons, bring forth the share,
All sharp to turn th' unfetter'd soil;
If we in autumn fain would bear
The golden sheaves, fear not the toil!

Those demagogues who strive for place,
And others chain'd to "glory's car,"
Fancy in *labor* there's disgrace,
And *honor* in inhuman war.

Not so, we reck our country's weal,
True honor lies in arts of peace,
We'll guard it with our hearts of steel,—
And *dig* to find the "golden fleece."

Nor while we till the teeming earth,
Let us forget that we are bound,
By all the blessings of our birth,
To strive that knowledge may abound.

What though the Spring to labor calls,
And Summer sees the forehead glow;
Autumn with plenty fills our halls—
In Winter pleasures overflow.

Then let us bless our happy state,
And yield to earth the seed and grain;
With grateful hearts we'll watch and wait,
"The early and the latter rain."

ALBANY, *March*, 1848. M. W. H.

SEA-COAST FARMS ENRICHED.—The committee of Barnstable Co. Ag. Society, state that John Doane has by skilful management, rendered his farm *five times* as productive of grain and grass, as it was when he purchased it 27 years ago. The soil was then exhausted, and most of it was thrown out to commons. It is generally sandy, and he has renovated it by plowing in sea-weed, and by making sea-weed compost in his barn-yard. Manure is the "beginning, middle, end," of all good farming.

NIAGARA SUSPENSION BRIDGE.—This is to be completed according to contract, in May, 1849. It is to be 1,100 feet long, and 230 feet above the water. Cost, $190,000. The wire cables are locked into the solid rock on each side, 100 feet below the surface, and will be strong enough to sustain 6,500 tons. If the bridge were densely crowded from one end to the other with heavy loaded teams, they would only weigh 300 tons, horses and all.

NOTES OF A TRAVELLER IN GREAT BRITAIN—No. 9.

THERE are in Wales many customs handed down from the remotest period. The girls, to this day, in many instances, perhaps one half, wear large beaver hats, like the men, instead of bonnets; though it is apparent the modern bonnet is making inroads everywhere on the steeple crowned beaver.

MILKING EWES.—I observed for the first time in Anglesea, the milking of ewes. They are kept in a flock, by themselves, and tethered with leather thongs, are driven into the yard at night, and the milk maid sits behind them, and soon performs her work. The quantity of milk I should think over a pint, usually—from this they ordinarily make cheese. I did not have an opportunity of testing its quality. Fuel is scarce, and turf fires are very common.

Oat cakes are among the principal articles used. A large griddle, from eighteen inches to two feet in diameter, is suspended in their deep, old fashioned fire places, and straw kindled under them, and the cakes, the whole size of the griddle, are very soon cooked, and they are laid upon poles suspended in the kitchen, where they roll up as they dry, and are used as they may be wanted. They are soaked in milk usually, and make a very palatable and highly nourishing diet. They keep a long time, and are used by the Welsh, when they cross the ocean, instead of sea biscuit.

The Welsh villages are built with low cottages of one story, the roof not more than seven feet from the ground, covered mostly with straw—the walls whitewashed. The streets are very narrow; and generally each village has some peculiar trade which is the leading branch of business. In one village, *LLanerchymdd*, (pronounced Clanerchymede,) I noticed an entire block of double houses occupied wholly by shoemakers, there being, I presume, from 80 to 100 shops.

FAIRS.—I was present at several Welsh fairs. One at the village above-named, was for cattle, horses, and domestic animals. The stock was mostly black cattle, cows and lean cattle. They did not give evidence of all the superiority which I had anticipated from Anglesea cattle, still there were some very good animals. The horses were mostly farm horses, though there were a few good roadsters. Poultry, eggs, stockings, and domestic articles, were in abundance. The women had the entire charge of the cattle, leading them around, and making sales, using a language truly unintelligible to an American. The gathering of the people was large—girls, with their high crowned hats, in great numbers. Each swain took his damsel into the public houses, and here the scenes were far different from any often witnessed in this country. Desirous of seeing all that was going on, I went into these houses, where I found the girls being treated by their companions to gin, beer, porter, &c.; and I caused no little astonishment to many of the fair dames when, on being called on to partake with them, I declined. I found a great desire among these girls to come to America, and I had many offers from them to come over and work at my own price, to pay for their passage. Well might they desire it, as they seldom receive more than twenty dollars a year, and have to perform labor in the field in addition to their household duties, which cannot be of the easiest character.

The tenant farmers, who regulate the prices at these fairs, were present in considerable numbers; and they enjoyed themselves together with a very liberal supply of drinking materials, of a far better quality than that used in the tap-room. What a field is Wales for some Hawkins or Gough to lecture in! I was invited to talk in one of the parishes on temperance; but the number of those who could understand English well is comparatively few. At all these fairs, bankers attend to furnish money to the dealers, as the sales are almost invariably made for cash. Here was a small room, with a sign over the door, "Branch of the Bank of England."

EDUCATION.—Education is attended to among the Welsh, and very few are found who cannot read or write. I was amused with an English schoolmaster, whom I met at one of their villages, who was teacher for some private families. Learning I was from America, he was very free to converse upon his success in educating the Welsh. He spoke much of the deficiency of books for small scholars, and expressed much satisfaction that he had been so fortunate as to procure one of the most popular spelling-books from America, which exceeded everything he had ever heard of. "It was just the thing," he said, "and would make a great revolution in education." I supposed, of course, that either Noah Webster's, or Cobb's, or Lawrence's, or some of our widely circulated books, was the one he had so fortunately procured, and I asked him to show it me, when he presented me with the "Sunday School Spelling Book!"—a very good book indeed, but far less extensive than those named. Yet this was a great advance on the elementary works used. I found, on examining their works for small children, a very great deficiency in many parts of the kingdom. Their schools are frequently in towns, kept in dark, damp cellars, where the wonder is that they live long enough to learn anything. The teachers were frequently quite old men, and in many cases I found that if nature had been bountiful to them, education had not added very much in preparing them for their work.

I attended a fair at Holyhead, which is the extreme point of Anglesea, and the nearest port to Ireland, from which mail steamers ply daily to Dublin, about sixty miles. There was nothing especially different from the fair before alluded to. This is about eighty miles from Liverpool. A royal harbor is being built here which will enclose about 300 acres, and a railroad is in progress from Chester to Holyhead, which will open direct railway communication with London. The town is situated on a rocky prominence, and the railway passes through a tunnel under the whole town to the harbor. George the IV, on his return from a visit to Ireland during his reign, landed at Holyhead, and gave the name of the Royal Harbor to it, and some splendid memorials have been erected here to his Majesty. An extensive pier has been erected, which extends several hundred feet from the shore, from which the steamers start. A splendid arch is erected at the upper end of this pier, commemorative of the landing of his Majesty, which is a fine specimen of workmanship and design, with appropriate inscriptions. A short distance from the town, on a commanding eminence, overlooking the harbor and channel, is a very handsome pillar or monument erected, commemorating the same event.

AGRICULTURAL SOCIETIES, PREMIUMS, &C.—Anglesea has an Agricultural Society which is doing much to improve the husbandry of the Island. Some of the premiums seem rather strange to Americans, but similar ones are given at many if not all the county associations. I give a few:

"To the male *servant* in husbandry, who has *served*

the longest in one place, the time being not less than 10 years—3 sovereigns.

"To the female servant who has served not less than 10 years—2 sovereigns."

On first reading the above one would be led to suppose, that premiums might as well be given to the servile laborers on our southern plantations, who have faithfully *served their masters*.

There are some premiums given that result in much good—

"To the overseers of the high roads in each of the hundreds of the county of Anglesea, who shall have repaired the roads within their parish in the most judicious manner—2 sovereigns."

"To the cottager, being an agricultural laborer, by whom the greatest number of legitimate children, exceeding 14 years of age, shall have been brought up in habits of industry, without parochial assistance—3 sovereigns."

Some of the premiums awarded were—"To Robert Davies, a laborer in husbandry at Rhosbeirio and at Lodge Manachdy, having faithfully served 43 years—3 sovereigns. To Ellen Williams, having faithfully served at Pentraeth, for 20 years—2 sovereigns." H.

"RUNNING OUT OF VARIETIES—CHANGE OF SEED."

MESSRS. EDITORS—Under the above caption, in the last December number of the Cultivator, you express the belief, that plants and vegetables do not degenerate, and that to propagate and continue them in perfection, a change of seed is not necessary. On the contrary, I had supposed that the science of botany and vegetable physiology had established the fact beyond controversy, that "any plant continually reproduced from the same seed on the same soil, will continually degenerate till it becomes extinct." And this important truth, in its application particularly to the potato, has been supported, if I mistake not, by the decided opinion of naturalists who have at all investigated the subject, and by the concurrent testimony of history for the last 150 years. If you will permit a little discussion of the subject, I trust, in case we do not come to the same conclusion, we shall amicably agree to differ; and as it is one that has an important practical bearing, an exhibition of some of the facts within our reach may do some good. It is to be deeply regretted, that in our agricultural literature, we have no full history of the potato. There are many facts regarding it recorded in the treatises of Humboldt and Sir Joseph Banks; in the Edinburgh Encyclopædia, and in many English works of the last century; but such a history as the importance of the subject demands, tracing its propagation, changes, diseases, failures, and reproduction in different countries, is yet a desideratum; and he would be a public benefactor who should prepare it.

I would premise, that an occasional instance of success or failure proves nothing; it may be only an exception to the general rule. So if Mr. Cooper's case, upon which you comment, varies from the general law of nature, it affords but one fact against thousands on the other side. But Mr. Cooper fully admits that potatoes do degenerate, and attributes it to the use of poor seed, and describes one way in which farmers may obtain good seed. That farmers, as he asserts, generally plant their poorest potatoes, I do not believe to be true; in an intercourse among them of more than forty years, accompanied with much observation, I have found such cases to be the rare exception to their general practice. And yet a number of varieties have run out within the last fifty years, and several others, recently in high repute, are fast failing, and have nearly ceased to produce balls. The present disease in the potato was generally first noticed in this country in 1843. Soon after that the agricultural census of this State was taken, which showed that the average product of the potato was only 90 bushels per acre—not half what it was 25 years ago; and that there had been a falling off of the potato crop in the State of upwards of six millions of bushels since 1840. See Cultivator, 1846, page 179. A similar decrease was shown in Massachusetts and in Maine, where the average crop had formerly been 200 bushels per acre. How is this to be accounted for, but by supposing a general degeneracy of the varieties now in use? A corresponding decrease in the crop is exhibited in the history of the plant in other countries and at other times. In a report made to the Royal Society of Agriculture in France in 1819, by M. Le Comte de Neufchateau, Minister of the Interior, respecting the labors of Oberlin in the Ban de la Roche, a district of highlands in the east of France, it is stated that "the potato had been introduced after the terrible scarcity of 1709." But in 1757, "the original plant of the potato had degenerated to such a point as to yield scarcely any increase." To remedy this defect, recourse was had not only to the seed balls, but M. Oberlin "imported from different countries a store of potatoes which replaced those degenerated; and these new productions continue in great demand at Strasburg market on account of their excellent quality."

The potato appears to have been introduced from America into England first by Sir John Hawkins in 1545. Others were carried there in 1573 by Sir Francis Drake; and others again by Sir Walter Raleigh in 1586, who, in 1610, sent some to be planted on his estates in Ireland. They were first cultivated as a field crop in Lancashire in 1684, before which time they were confined to gardens, and only used occasionally by the most wealthy. To Lancashire the field culture was confined many years before it was extended much to other counties; but in the early part of the last century, the cultivation of it became general in Ireland and Scotland. In Lancashire the discovery seems to have been first made, that the potato, by continued cultivation, became deteriorated both in quantity and quality, and the practice was adopted there, and simultaneously in Ireland, of renewing the root or tuber by planting the seed balls. This continued to be the practice among farmers through the whole of the last century, and during that time hundreds of varieties, that were good for a time, and are named in English treatises on the potato, entirely run out. "Farmers," says a standard writer in 1797, "hold it to be necessary to renew the potatoes from the seed once in 14 or 15 years; because, after that period, potatoes degenerate, and produce less and less, till they almost come to nothing." Judge Buel, in an essay, remarks:—"The duration of a variety in perfection, is generally computed at from fourteen to twenty years, though this period is sometimes prolonged by a change of soil or climate." The tendency to degenerate was not a mere opinion, but a fixed fact, attested by the general observation and experience of farmers. It was the same in various parts of Germany, and particularly in Nova Scotia, where the finest potatoes were formerly grown. In that Province little reliance is placed on the introduction of tubers from abroad; their experience tells them, that a reproduction from the seed balls is the

most sure and profitable. And in no part of the world, probably, has this reproduction been resorted to oftener than there.

Mr. T. A. Knight, the former distinguished President of the London Horticultural Society, experimented with the potato many years, and in fact made it a particular subject of investigation during his life. In a treatise in the British Farmer's Magazine, he says:—"The first point to which I wish to direct the attention of the cultivator of the potato is, *the age of the variety;* for it has long been known, that *every variety cultivated, gradually becomes debilitated; and loses a large portion of its powers of producing; and I believe that almost every variety now cultivated in this and the adjoining counties, has long since passed the period of its age, at which it ought to have resigned its place to a succession.*"

Similar to the above is the language used in the Library of Useful Knowledge, Farmer's Series—"It has been ascertained by repeated trials, that every variety of the potato, when propagated during a series of years, either by cuttings from the root, or by the whole tubers, is subject to degenerate; in some, the quality remaining good after the produce in quantity has become defective, whilst with others it disappears with the vigor of the plant."

In the year 1778, a disease called the *curl*, affecting both the vine and tuber, appeared among several varieties of potatoes in England, and soon spread through Scotland and Ireland, and subsequently developed itself more or less in this country. It occasioned a general panic, as much perhaps, as the disease that has made such havoc for a few years past; and the multitude of books and pamphlets that were written on the subject, was beyond all precedent. Scientific men engaged in a great variety of experiments, and Parliament ordered investigations, &c.; but nothing absolutely conclusive was ascertained as to the nature or cause of the disease, or the proper remedy. The more general belief seemed to be, that the disease was more or less induced by the age or deterioration of varieties, as those more recently produced from the seed were almost wholly exempt. As the result of experiments, it was ascertained that varieties differed greatly in their nutritive properties—from 30 to 50 per cent.; that they also differed greatly in their vital energy and hardiness of constitution, some of equal age running out much sooner than others; and that the continuance of a variety and its exemption from, or power to resist disease, depended as much upon the above circumstances as upon its age.

Willis Gaylord, I think, (see Cultivator vol. 7, page 165,) expresses the belief, that "the formidable disease known as the curl, is the natural result of the old age of the variety, and indicates the failure of its vegetative powers." "The new varieties of this valuable root, those lately originated from seeds, have not, to our knowledge, been affected by the curl in the least. The inference, then, seems to be a fair one, that in the production of the potato, as in many other plants, a recurrence to the fundamental law of propagation, that from seeds, must be occasionally resorted to, in order to prevent deterioration. The new varieties of the potato, that have been introduced into culture in England and in the United States, from the seeds, exhibit a vigor and strength which none of the long cultivated kinds show." This last mentioned fact is confirmed by the statements of many English and American writers, and abundantly verified by experiments frequently made. In my reading, I have met with many passages similar to the following, which I extract from the Pennsylvania Farmer, published in 1804. Speaking of a field of potatoes raised from the seed, Eli Bronson, of Conn., says;—"Part of the field was better by one-half than the other part. In the best part, the seed was the second year from the balls; in the other part the seed potatoes were from the balls several years before, and had been planted yearly."

One of the most valuable communications respecting the potato, is found in Mr. Ellsworth's report from the Patent Office in 1844. M. Standinger, who had resided at Gros Flotbeck, near Hamburg, in Germany, near 50 years, paid great attention to the potato, and cultivated from the balls for *thirty-six years in succession.* His long experience and constant intercourse with practical men, and his habits of observation, give peculiar weight to his testimony. In view of the weakness in the vital energy of the plant, occasioned, he says, by constantly planting the tubers, he urges the importance of often raising new varieties from the seed; adding, that those grown from the seed balls have a more vigorous growth than those obtained from bulbs, that have been used for seed for some years. His practice, which he minutely details, enabled him to raise as large a crop, both as to weight and measure, the first year from the seed, as could be obtained by planting the bulbs. The opinion of the farmers, that it requires three or four years to bring to maturity and to a large size, potatoes raised from the seed, he considers not well founded, and attributes it to their unskilful method of cultivating them. And in relation to the disease among potatoes, that has spread over Europe the last few years, he expresses his belief that it is owing to degeneracy in the plant, and that the only effectual remedy is to start new varieties from the seed. In proof of this, he states "*that in the neighborhood of Hamburg, as well as also in Holstein, there is not the slightest trace of this disease to be seen, and no complaint of it has ever been heard; the reason of this being, that in the vicinity of Hamburg, there is always an opportunity of obtaining good seed potatoes,*" *&c.*

I did not intend, Messrs. Editors, to make any remarks about the cause or remedy of the present widespread disease in the potato; *that* I consider a distinct question from the one I had in view, and will leave it to be elucidated by other pens. That the older varieties of the potato are fast failing, and can be replaced only by renewing them from the seed; that the potato is susceptible of progressive improvement, so that there is reason to believe. varieties may hereafter be produced far superior in every desirable quality to any yet known; that a large crop, of good size for the table, may be raised from the seed the first year, so as to render it profitable to the grower; and that such seedlings, as a general rule, do remain fair and sound, while nearly all the old varieties are more or less diseased and running out, I consider facts well established. These facts have had a living illustration under my own eye during the last few years, while I have witnessed the operations and success of a neighbor, who has obtained the premium for the best and greatest variety of seedling potatoes at the last two Fairs of the State Agricultural Society. While I witness such facts, developed by persevering, well directed labor, I predict with confidence, that the potato will, or may, be perpetuated as long as seed-time and harvest shall endure.

H. A. Parsons.

Buffalo, Jan. 4, 1848.

Plowing for Wheat.—Elias Cost, of Ontario co., N. Y., is very successful in raising wheat, by preparing his fallows with a *single plowing*—sometime during summer—all the rest of the mellowing and weed-killing being done with a two-horse cultivator. The wheat is covered after sowing, by passing the cultivator but once over it. A strip 6 ft. wide is then covered at a time. The soil is not heavy.

CULTIVATION OF ONIONS.

THE cultivation of onions is in many sections an important business. In some parts of Connecticut, Massachusetts, and other places, they are raised in large quantities, and disposed of both for home consumption and for exportation. As we have had many inquiries in regard to the culture of this vegetable, we think we cannot give the information desired in a better manner than it is embodied in the following essay, which was written by JOHN W. PROCTOR, Esq., and received a premium from the Essex (Mass.) Ag. Society. At our request Mr. P. has furnished a drawing of the "Onion Hoe," which has enabled us to give a cut and description of the implement in connexion with the essay:—

The culture of onions has increased so much, within a few years, in this vicinity, that it has become one of the staple products of the county. In the town of Danvers, more money is realized from the sale of the onion, than in any other product of the soil. Products of so much value, and commanding so much attention, are fit subjects of inquiry; and if there be any facts relating to their cultivation not generally known, it may be useful to have them brought forward.

In making these inquiries, our attention has been directed almost entirely to practical cultivators, without reference to scientific treatises. Our intention being to tell their story, as near as possible, in their own way.

We shall treat of the subject in the following order:

1. The preparation of the land.
2. The manure best adapted to promote the growth.
3. The raising and planting of the seed.
4. The care necessary to be applied while growing.
5. The blights and injuries to which the crop may be liable.
6. The time and manner of harvesting.

1. As to the preparation of the land.

Differing from most other crops, the onion grows well on the same land for an indefinite number of years. Instances of continued appropriation of the same pieces of land to the growing of onions, for *ten, fifteen, twenty*, and even *thirty years*, have come to our knowledge. It is the opinion of many that crop is better, after the land has been thus used a few years, than at first. Whether this arises from any influence of the crop upon the soil, or is the effect of continued dressing of manures, we have no means of determining. This is certain, that the qualities of the soil necessary for the production of good crops are not exhausted by continued cultivation.

Rarely, if ever, have we known the onion sowed upon the turf when first turned over. It is usual to subdue and pulverize the soil, by the cultivation of corn, or some other crop. Not unfrequently the first year with corn, the second with carrots, and afterwards with onions. It is important, before the seed is sown, that the surface be mellow, finely pulverized, and clear of stones or other impediments, to the free and unobstructed use of the machine for this purpose. The finer and more uniformly mellow the surface is made, the better. Shallow plowing, say from four to six inches deep, is usually practiced. Once plowing only in the spring, and frequent harrowings, are practiced. Before the plowing, the dressing is usually spread upon the surface of the field, so as to be covered or intermixed in the furrow. The mingling and subdivision of it, is effected by the use of the harrow.

Whether it would not be advantageous occasionally, to stir the land to the full depth of the soil, is a point on which there is a difference of opinion; most of the cultivators inclining to the use of shallow plowing only. There are some facts tending to show, that occasional deep stirring of the soil does no harm to the onion crop, but on the contrary is decidedly beneficial. As for instance, onions do better where carrots have grown the year preceding, than after any other crop. The carrot necessarily starts the soil to the depth of ten or twelve inches. Possibly there may some other influence upon the soil from the plant itself. Our belief is, that the thorough and deep stirring of it, is the principal preparatory benefit.

2. The manure best adapted to promote the growth.

Any strong manure, well rotted and finely subdivided will answer. But the general impression seems to be, that manure from stables, where the horses are freely fed with grain, is the best; and that it should be at least one year old, because it will not be sufficiently rotten in a less time. All agree that the dressing for the land should be kept near the surface, well mixed, and as fine as possible. Though we have seen the present year a very superior growth of onions, where green manure from the barn-yard was applied in the spring; but particular pains were taken to subdivide and intermingle it with the soil; and to bush-harrow the land so thoroughly, that very little manure was exposed upon the surface,

Muscle-bed is frequently used upon onion land. A portion of this is deemed by some almost indispensable. We have known the continued use for half a dozen years in succession, even without other manures, with a continuation of fair crops; but the general impression is, that it will not do to repeat the application of muscle-bed many years in succession. The effect being to harden the land, and make too much of a crust about the surface. Without question the effect of the muscle-bed is congenial to the growth of the onion, giving those who live in the vicinity of rivers where it is found, a special advantage over those who are remote from it.

Leached ashes are also a valuable manure in the cultivation of the onion; more so when *leached* than before. All kinds of ashes are advantageously applied on onion land.

Compost manure made of meadow mud and droppings from the cattle, we have known advantageously applied on onion fields; but we have many doubts as to this being the best application of this kind of manure. A more lively and quickly operating manure is better for the onion; one that will give them an early start, and advance them as fast as possible, in the first part of the season. The utmost vigilance and activity is used by our cultivators in getting their land ready, at an early period of the season, for the reception of the seed. It is the first field labor of the spring. The use of compost manure will depend much upon the constituents of the soil with which it is mixed. If the soil be a sandy loam, with a porous subsoil, the compost will do tolerably well; but if it be a black soil, with a clayey subsoil, such as are most of the lands where onions are raised in this vicinity, stable manure, or muscle-bed, or leached ashes, or a mixture of these, will be a better application. The quantity ordinarily applied annually is from four to five cords to the acre. Whatever is applied should be generously applied. It will be vain to expect full crops of onions, without full manuring. When the manure is collected, it is benefitted much by a free application of *elbow grease*

in its preparation. The cultivator of the onion must work early and late, and in good earnest. Nothing short of forcible and persevering labor will answer. No man who is afraid of *soiling his hands or the knees of his trowsers* will do to engage in this business. Close work at the proper time, is the only sure guarantee of a good crop.

3. The raising and planting of the seed.

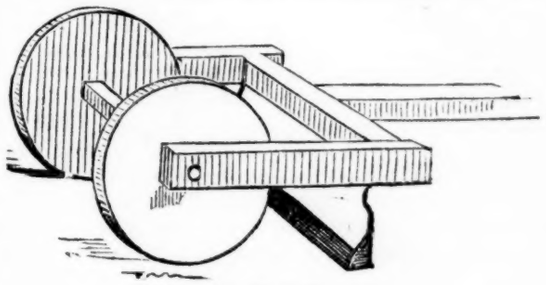
In relation to the onion, as well as all other vegetables, much care is necessary in the selection of the plants for seed, and the cultivation of the seed. By the application of this care, the character of the article raised may be modified almost at pleasure. Until within a few years the *flat onion*, hollow about the stem, has been preferred. The thinner the handsomer. But it is now understood, that the *round, thick, plump onion*, is preferable in many respects. It is thought to yield better, and weigh heavier. It is found to have a decided preference in the market, commanding *ten per cent.* more in price. By selecting those of most desirable form, which ripen the earliest, and carefully setting them for seed, where they will not be exposed to the impregnation of the baser sorts, the quality has been materially changed and improved. These peculiarities in the onion were first noticed in this vicinity by Mr. Daniel Buxton. He was careful to select in the field before the crop was gathered, such onions as he preferred, and to preserve them for seed.

By so doing, the seed which he raised soon acquired a character superior to any other. Many of those who had been accustomed to raise their own seed in the ordinary way, laid it aside, and purchased seed raised by Mr. Buxton, and found their account in so doing. There are three varieties of the onion raised in this vicinity—the *Silver-skin*, the *Red*, and the *White onion*. The *Silver-skin* is the predominant species, and more cultivated than all others. The *Red* is preferred by some—sells better in some foreign markets, but does not yield so abundantly. The *White onion* yields as well as either of the others, is milder and preferable for immediate use; it will not keep as well, and is not fit for exportation; which is the principal use made of our onions.

The common drill machine is used for the distribution of the seed. This admits of regulation, so as to scatter it more or less thick; and in this there is room for the application of sound judgment. The usual quantity sown is about three pounds to an acre. As a general rule, we should say, one pound of good seed was the proper quantity for a quarter of an acre of land of good quality well prepared. It is desirable to have the seed planted as thick as they will grow fairly, both to secure a full crop, and prevent the onion growing too large. Onions from one to two inches in diameter being preferred to those of a larger size. The skilful cultivator carefully looks after all these incidents relating to his crop.

4. The care necessary to be applied while growing.

Much of the success of the crop depends on this care. At first the plant is extremely tender, and requires to be handled with much caution. Any derangement of the fibres or roots of the young plant, is attended with prejudicial consequences. Much attention is necessary to prevent weeds gaining the ascendancy; and in eradicating the weeds. Want of due care in this is often the cause of failure of a crop. We have known the present season, a highly promising crop to be injured *twenty per cent.* at least, by permitting the weeds to remain unnoticed *one week too long*. This is especially true when there has been a want of due care in preventing the scattering of the seeds of the weeds on the land in the years preceding. Care should be taken, both that no weeds shall ripen their seed upon the land, and that no weed seed shall be found in the



Onion Hoe—Fig. 22.

manure. In this respect, warm stable manure, muscle-bed, and ashes, have a decided superiority over all other manures. Perhaps there is no plant more liable to be injured by weeds than the onion. The fibres it sends out are very numerous, minute and tender; any fracture of any of these necessarily impairs the perfection of the plant. When the land is in the proper condition, two careful weedings are all that may be necessary. The rest of the stirring of the ground that may be required to promote the growth, can be done with the *Onion Hoe*, (fig. 22,) an instrument specially constructed for the purpose, moving on wheels, and adapted to the width of the rows. It is calculated to pass between the rows of onions—being either drawn or pushed. The wheels cover a space of about one foot in width, and the length of the cutting blade is also about a foot. The length of the handle is about five and a half feet. The usual distance between the rows is fourteen inches, and as the hoe takes a breadth of twelve inches, it cuts over all the ground, excepting a strip of two inches along each row. The cost of the hoe varies from $1.25 to $1.50. It was invented by Mr. Joseph Bushby, of Danvers, an intelligent and successful cultivator of garden vegetables, about 25 years since; and was used by himself and neighbors only for about ten years. It has now come into general use, and saves much of *back-aching labor*. The distance between the rows can be varied according to the quality and condition of the soil. Keeping the ground well stirred, loose, and free of weeds, greatly facilitates the bottoming of the onion. There is no plant that will better reward diligent care in the cultivation. The entire difference between a bountiful crop and no crop at all, often depends on this. The old maxim, "a stitch in time saves nine," applies with great force in raising onions.

5. The blights and injuries to which the crop may be subject.

So far as we have observed, this crop is as certain as any other that is cultivated. We know that onions will not grow without a reasonable proportion of heat and moisture; but we have rarely, if ever known, an entire failure of the crop, where due diligence has been used. There are occasionally blights, the causes of which we have not learned. The more prominent will be noticed.

Sometimes we have seen the plant covered with a small insect or *louse*, that gives the top a white or light colored aspect, and stops and stints the growth. These make their appearance about the time the bottoming commences. We have heard their appearance charged to the use of muscle-bed; but whether they are limited to land on which muscle-bed has been used, we cannot say. We think not. We think they are natural associates of the plant. The effect of them is to diminish the *quantity*, but not materially injure the *quality* of the vegetable.

The crop is sometimes injured by a *blue mould* that gathers on the tops, occasioned by fogs, or an excess of moisture from frequent and long continued rains.

There is a *worm* or *maggot*, occasionally found upon the onion plant, in the early stages of its growth, caus-

ing it to turn *yellow* and die. This insect will be found in the bulb, originating from eggs laid upon the leaves, by a small ash colored fly, the scientific name of which is said to be *Anthomyia ceparum*, (See Transactions of the N. Y. State Ag. Society for 1843, page 135.) It comes to maturity in less than a month; so that there may be several generations in the course of the season. Their appearance in this vicinity is rare. Pulverized charcoal and fire have been found the most effectual remedies, against the ravages of this class of depredators.

The most annoying enemy of the onion is the *cut worm* or *grub worm*. It probably is the same described by Dr. Harris, in his report on the Insects of Mass. injurious to vegetation, p. 324, there called "*Agrotis devastator.*" And in the 1st vol. of Silliman's Journal of Science, "*Phalæna noctua devastator;*" though Dr. Harris does not mention the *onion* as among the plants upon which it feeds; probably considering it like *tobacco*, as *too noisome* to be used by any decently civilized being. They are said "to seek their food in the night, or in cloudy weather, and retire before sunrise into the ground, or beneath stones, or any substance which can shelter them from the rays of the sun; here they remain coiled up during the day, except while devouring their food, which they drag into their places of concealment." The remedy for these worms, suggested by our cultivators, corresponds nearly with that proposed by Mr. Foote, of Berkshire, "*to catch them and pull their teeth out.*" This being effectually done to all, their operations will be of a limited character. When this is omitted, we have sometimes known whole fields almost entirely cut down by these rapacious devourers. They sweep clean where they go, not suffering even the weeds or any other herbage to flourish. They are more frequently found on *old* ground than on *new;* and particularly where the ground has been covered during the winter with *chickweed or other vegetable substance*, on which the eggs from which they originate may have been deposited. Hence a benefit of clearing the ground of all vegetable matter or other obstructions in the autumn, after the crop is gathered. This clearing also facilitates the early planting in the spring. Autumnal plowing, as it exposes the soil more fully to the action of the frost, and disarranges all abodes for the winter made by insects, may have a tendency to diminish their number.

6. The time and manner of harvesting.

When the tops begin to wither and fall, then it is usual to start the onions from their bed, and throw them together in rows—say eight or ten growing rows into one. After they have lain thus about one week, they are stirred and turned with a rake, and in about one week more, when the ground is dry, and the weather fair, they are gathered up by cart loads, and taken to the barn. Here they are sorted and cleared of refuse leaves, and then they are in a condition to be *bunched* or *barreled*.

It should be remarked, that a large part of the labor of *weeding*, *gathering* and *sorting* the onion, can be performed by children from *ten* to *sixteen* years of age. Boys of this age, when properly instructed, will do about as much as men. They are more nimble, and can come at the work with greater facility. The sorting of the onion is frequently done by girls as well as boys. From *three* to *five* dollars a week, at one cent a basket, are usually earned by them during the period of harvesting—which includes the months of September and October. After the crop is taken off, if the surface is sloping, it is useful to plow furrows about one rod apart, to keep the surface from washing. Unless this is done, all the herbage being gone, much of the soil will be likely to be misplaced, by the melting of snows and running of water in the spring.

The inquiry arises, whether the growth of the onion is limited to soils of particular character, or whether it can be cultivated upon any good soil, with proper attention. We know that there is a popular impression, that there are but few places in which the onion can be cultivated advantageously. So far as our own observation has extended, this impression is in a great measure erroneous. Like every other plant, the onion grows best on very good soils, in very good condition. But we have known very fair crops, on plain, light land, after the same was well saturated with *manure, muscle-bed* or *ashes*. A good substratum must be laid before a good crop can be expected; and this being done, a crop may be expected on almost any soil, that will support other vegetables.

If we were asked, what course is best to be pursued with land, on which onions have never been raised, to bring it into a condition for a successful cultivation of the crop, we should say—begin by plowing to the full depth of the nutritive soil, and during the first and second years, thoroughly subdue and mellow the soil by the cultivation of crops of corn and carrots, with liberal dressings of manure; then thoroughly incorporate with the soil a dressing of strong manure and muscle-bed, just covering this dressing; then harrow the surface thoroughly, and clear it of all roots, weeds, or othe obstructions; then apply a coating of lively, well rotted manure to the surface, and bush harrow it; and then it will be in a condition to receive the seed, which is to be inserted as soon as the opening of the spring will admit of its being done.

We are aware that we make the raising of the onion dependant upon severe labor and vigilant attention. We know that it cannot be successfully done without these. But it is not labor lost. No cultivation, within our observation, better repays for the labor and incidental expenses. We have known, the present season, acres that have yielded their owners a net income of more than *two hundred dollars;* and we know that a man with two boys can well attend to half a dozen acres of such cultivation. Surely, when as at present, there is no limit to the demand for the artiele, and a ready cash market, those who have *acres* and are willing to labor, need not be in want of a fair compensation for their labor.

As samples of the present years produce in the town of Danvers, we state the following that have come under our notice:

Names.	Acres.	Produce.
John Peaslee,	3	1,980 bushels.
Daniel Osborn & Son,	1 1-5	870 "
James P. King,	1 1-3	660 "
Aaron C. Proctor,	1 1-4	600 "
E. & D. Buxton,	6 1-2	2.750 "
Henry Bushby,	4	2.000 "
Joseph Bushby,	3	1,500 "

Yielding an average of more than 500 bushels to the acre.

POTATO ROT.—Though not always successful, the practice of *very early* planting appears to gain favor. The Morris Jerseyman says that a farmer planted his potatoes earlier than usual this season, which were dug and put into his cellar before the rains came on; and that they still remain perfectly sound. In Mississippi, the best result has been obtained by starting potatoes in hotbeds, and transplanting *slips* from them when three or four inches long—the original continuing to send forth fresh slips for a long time. We have raised potatoes ten days to two weeks earlier by placing the seed in winter in a warm place, so as to sprout them two inches by the very earliest day that the ground could be plowed to receive them.

MAPLE SUGAR IN VERMONT.—The quantity of maple sugar made in Vermont in 1840, was 4,647,000 lbs.

REMARKS ON BREEDING HORSES—No. III.

EDITORS OF THE CULTIVATOR—In my first article I noticed four kinds of horses, viz: carriage horses—saddle horses—trotting horses and draught horses. I concluded my last article with a few observations on trotting horses. Before proceeding to remark on draught horses, I would introduce another, perhaps a distinct stock of horses—one at least that does not come under either of the heads above named—I refer to such as are generally used to promiscuous service, and prized chiefly for their performance on the road—called in this country I believe, "horses of all work," in England, "hackneys."

Youatt represents the hackney as a horse that should not exceed fifteen hands and an inch in height—thinks he would be sufficiently strong, and more pleasant for general use, below that standard. The bones below the knee, he says, should be deep and flat, and the tendon not tied in—the pastern should be short, and although oblique or slanting, yet far less so than that of the race horse. Their feet should be of a size corresponding with the bulk of the animal, neither too hollow or too flat—the fore legs should be perfectly straight; the back should be straight and short—the forehand high—the barrel round and the chest deep.

I think we have no horses in our country that answer this description better than the Morgans. About the origin of these, there is much disagreement. Their most ardent admirers seem much concerned to prove that they sprung from a lucky cross of an English thoroughbred and a Yankee mare. But the more prevalent opinion is, that they have from the first, been strongly impregnated with French or Norman blood. And I am free to say that after careful examination of several specimens of the breed, and after reading all, or nearly all that has been claimed by their owners and admirers, I have adopted the more prevalent opinion. It is possible indeed, that the strain of Norman blood was originally derived, through their dam, from the descendants of Norfolk or Suffolk horses, imported at an early day by the New England Colonists; though it is much easier to believe that it came from Canadian mares. But from whatever source it may have been derived, that they have it and had it, I fully believe.

It is perhaps proper to say that my opinion as to the origin of these horses has been strongly biassed by the present appearance of their descendants; and it is possible the mixture of French blood has been wholly acquired by the later generations, and is the result of negligence in breeding. However, I consider this of minor importance; I do not think the less of the horses because I believe they originated in the cross with the Normans—nor do I think their friends need disclaim it so strenuously; especially as it is generally conceded, that they are a distinct and a valuable stock of horses.

It cannot be denied that they possess great energy and courage—great strength and endurance—great ambition and great docility; that they mature early and are easily kept; that they are pleasant drivers and always ready for business, and what is more important, they sell readily at high prices—still I cannot bestow upon them the unqualified praise they have so often received. They are not the style of horses I most admire, or that I would take the most pride in breeding. Driven in spans to light wagons, they certainly are dapper little animals, and in that capacity all that could be desired—but in other departments of service, I think they have many superiors. If for instance I wanted an elegant carriage or single horse for light and rapid driving as well as for family use, and occasional labor on my farm, I would greatly prefer one of the early descendants of Duroc or Messenger, of Mambrino or Bellfounder, not that they are more hardy or stronger or even fleeter, perhaps, but because they had a nobler appearance, greater symmetry of form, a more graceful, as well as a more majestic carriage, more of those commanding features, usually ascribed to the noblest specimens of their race. This of course is a mere matter of individual taste, to be approved or rejected as the reader may incline.

I am well aware that the Morgan horse has been much admired for his style of action. Indeed I think this is one of the points, in which it is claimed by his friends that he excels all others, and perhaps my exception to this opinion will be received with great surprise. But I really think I have never seen a Morgan horse that I considered either a graceful or a stately mover; I have seen many that were full of show and action, pompous little creatures, almost bursting with zeal and animation, but with such broad breasts and bantam figures, as to give their gait too much the appearance of a strut or waddle, reminding me somewhat of the little coxcomb, who, as he parades the street, swings his arms and stretches back his head, and impudently looks every person in the face, as if to say—"You must not presume to think me small!"

In answer to this it may be said, that the great endurance of the Morgan horse, upon the road; the facility with which he performs long journeys, &c., is sufficient evidence that his motion is graceful and easy, for it is seldom indeed that a horse with labored action, is capable of making long and rapid journeys; very true; but I think the endurance of the Morgan horse (sometimes overrated I suspect) is attributable more to his great vital energy and muscular development, than to his easy paces.

Again, symmetry of form is claimed as a prominent excellency of the Morgan horses, but I must except to this opinion also. I think their legs are too short for their length of neck and bulk of body. They are generally too wide forward and too close behind, so that many of them *paddle* with their fore feet, and at the same time unless carefully shod, interfere with their hind ones. Some of them also incline too much to hollow back. But I need not say more, unless it be to repeat the remark that the most of these objections are too exclusively matters of taste to bear much disputation. It may be proper also to add, that in my opinion of the Morgan horse, I do not think I am sustained by the public at large, and that there are many men, better judges of horses than I, who would much prefer a genuine, well selected Morgan horse to any other that could be procured.

As to the breeding of Morgan horses, I would strenuously advise an immediate return to thorough-bred families, from which it is claimed they originated. They have been bred too long on common stock. I am confident that much of their original superiority may be reclaimed by a judicious crossing with higher bred animals, and to effect their improvement I would much prefer to breed from Morgan mares to thorough bred stallions, than from Morgan stallions to thorough bred mares; because as far as my observation extends, whenever it is sought to mix a strain of Norman blood in that of the Arabian or English race horse, it should be through the dam rather than the sire. I believe there are very few instances where valuable stock has been produced by Morgan horses and highly bred mares,

but there have been many successful crosses of Norman or Canadian mares to thorough-bred stallions.

In breeding from Morgan stallions, I believe it is generally admitted, that mares with a cross of Canadian blood should be avoided, at least this is the experience of Mr. Thurston, the former owner of the Black Hawk Morgan, he having observed that colts got by Black Hawk on mares tinctured with Canadian blood, are generally inferior to those got on other mares. A clear indication that the stock has gone far enough in that direction.

It may be objected to my articles, that I having been striving to turn everything back to thorough-bred* families,—whereas it has been advised by better authority, that "the best course for improving our horses" is to direct our efforts more exclusively to the various families of grade and native stock that have been long approved in our country, and breed each kind within itself, until its peculiar characteristics are fully and permanently developed, with a view I suppose of gratifying our national vanity, by establishing breeds of our own, such as we can claim to be distinctively American, or forsooth *Republican*. But I am quite sure that such a course would not be recommended for breeding sheep or cattle—it would not be politic, inasmuch as there are many very wealthy, influential and philanthropic men in our country, engaged in breeding English stock. Neither would it be popular inasmuch as it has been well settled than in all attempts to improve sheep or cattle, *none but thorough-bred males* should be employed. Besides it is well known that it cost Bakewell the labor of a lifetime and a large fortune to establish a single breed of sheep—and the Messrs. Colling much the same, simply to improve a breed of cattle. But if such a course is not advisable in breeding cattle, of which we have native breeds, thought by many to be superior in some respects, to the English—why should it be adopted in breeding horses of which we have no native families worth perpetuating. Most of the horses, we have ever had that were of any value, were derived from foreign sources, and most of those that remain are but degenerate descendants of imported thorough-breds. To breed these within themselves therefore, with a view "to insure uniformity of character," would be only to breed them farther down in their course of degeneration, and instead of insuring "uniformity of character," would be only insuring uniformity of defects and making them, in the end, utterly worthless. It is impossible to breed them *up*, or towards their former standard, without going back to the place where they began to degenerate—or in other words, without returning to the thorough-bred families from which they sprung.

I have also through the entire course of these articles, advocated the breeding of horses separately, with reference to different departments of service. I have done so, because I think every breeder should have a definite object in view. If he breeds for a combination of characteristics, he will in all probability become confused, and get only an unworthy mongrel.

If we aim to breed elegant carriage and saddle and trotting horses, we will, no doubt, produce a sufficient number of hackneys or "horses of all work," in spite of ourselves. But if we aim only at producing hackneys or "horses of all work," there is danger that the result of our labors will be but a multiplication of indifferent or worthless animals, already too numerous in our country.

I had intended to make some remarks on draught horses, but this article has become so long, that I am sure your readers will gladly excuse me.

Syracuse. Feb. 1848. JOHN BARBER BURNET.

* By thoroughbreds we generally mean, the English race horse, the Barb, the Arabian, and their lineal descendants.

Diseases of Animals, &c.

Scours in Swine.

It is frequently remarked that it is useless to attempt to cure sick hogs, and to the prevalence of this opinion is to be attributed in a great degree no doubt, that want of effort which results in the loss of so many of these valuable domestic animals. In June last, I observed that one of my hogs manifested an indisposition to eat. I paid not much attention to him for a few days, when again noticing him, I saw that he had failed in flesh considerably. He was then put in a pen by himself, and I soon found that he had the scours very badly. His appetite decreased to such a degree, that a gill of corn was more than he would eat in a day, while the complaint continued to increase. I tried different remedies without effect, when, as a last resort, I had recourse to the Cultivator for information. Among various cures for this complaint in *calves*, (I saw none for swine) I noticed that *calomel* had been given with good effect. I procured about 30 grains, which quantity was given in two doses in the course of a day. He soon manifested favorable symptoms, and showed a disposition for food. He was fed with sweet milk, boiled and thickened with flour, until cured. I would say in conclusion, that I think the information I got from the Cultivator, in this one case, saved me more than its cost for a dozen years at least; and as a testimony of the regard I have for your paper, I send you the price of eighteen copies for the present year—most of which are for new subscribers. A. D. *Princeton, N. J., Jan.* 12, 1848.

"Tail Sickness."

The tails of cattle sometimes increase in length to an inordinate degree. There is a popular belief that this elongation of the tail injuriously affects the animal's health. Youatt, Dick, and some other veterinarians, ridicule the idea of any disease being brought on by this cause. They admit, however, that letting blood by cutting off the tail, may in some cases afford relief to animals suffering from diseases brought on in various ways; but they hold that the same benefit would follow from taking the same quantity of blood from any other part. We presume that the amputation of an inch of the tail, has but little effect in any way, excepting that suggested by the writers referred to. Formerly it was the belief that the *palsy* in cattle was caused by "tail sickness," and superstitious people in some instances resorted to a *charm* to effect a cure. A piece of turf on which the animal had trodden was hung on a stake, accompanied by incantations, and a "black cat" was made to pass three times around the cow's body, "over the back and under the belly." If the cat struggled and scratched smartly, she generally got away by the time she had been round three times, and the necromancers were convinced that the bewitching devil had passed into her.

REMEDY FOR WINTER-KILL.—A correspondent of the Ohio Cultivator, gives the following preventive of *winter-killing* in cattle, hogs, and sheep, many often dying during winter and early spring:—

R.—Good shelter-um, q. s. (*quantum sufficit.*)
Corn-meal-um, q. s.
Clear water-um, q. s.

The "*corn-meal-um*" to be made into a poultice, and kept constantly applied to the mucous membrane of the stomach. [For the benefit of strictly professional men, the above may be given as follows:—

R.—Refug. opt. q. s.
Zea pulv. q. s.
Aq. font. q. s.]

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

TRANSACTIONS OF THE OHIO NURSERYMEN AND FRUIT GROWERS' CONVENTION, *held at Columbus, September 29th and 30th*, 1847. 8 vo. pamphlet, 46 pages.

The state of Ohio, in many respects a fine fruit country, has been rather remarkable for the confusion of the names of its apples. Besides its native fruits, many new names have been applied to old varieties introduced from different sources, at an early period. More lately these were nearly all supposed to be new varieties of high merit. Recent investigations have restored in many cases the original and true name; in this way the Putnam Russet has been found to be the old Roxbury Russet; the Little Pearmain, Bullock's Pippin; the White Pippin, Canadian Reinette; Red Romanite, the Carthouse or Gilpin; Oxeye, the Vandervere, &c.

In order to reduce this chaos to order, as well as bring out the finest native varieties, a Fruit Convention was held in central Ohio, and the results of its deliberations are given in the valuable pamphlet before us. For copies, we are indebted to M. B. Bateham and F. R. Elliott, secretaries, by the latter of whom it was chiefly prepared for the press, and whose extensive acquaintance with eastern and western fruits, has eminently qualified him to throw light upon the subject.

The present work contains outline figures of the Early Harvest, Tart Bough, (a sub-variety of the Early Harvest, but three weeks later,) Early Strawberry, Early Pennock, Roxbury Russet, Cooper Apple, Willow Twig, Wells Apple, Raules' Jennett, Western Spy, Phillips' Sweeting, and Ohio Nonpareil; the seven last are believed to be western varieties. A very large number of others are noticed, and some of them described. There are also figures and descriptions of seven new and fine varieties of cherry, originated by Dr. Kirtland of Cleaveland—making 19 figures in all. There are also notices of several known varieties of pears and some other fruits, which were exhibited to the Convention.

This cannot fail to be a very interesting work to every amateur in the country; and to every nurseryman and fruit raiser in Ohio, it must be invaluable. It is sold at the office of the Ohio Cultivator, Columbus, for 25 cts. per copy, or $1 for five copies.

A large field remains open for future labor, and a permanent State Fruit Committee was appointed, and another Convention is to be held next autumn.

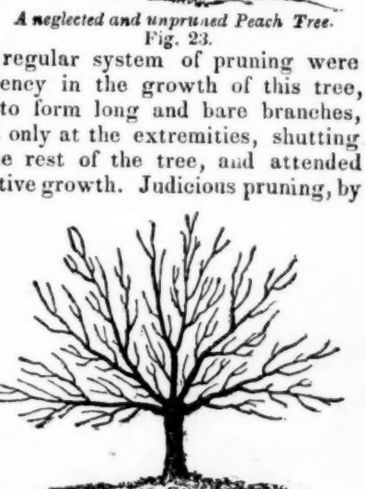
Management of Fruit Trees, &c.—Timely Hints.

PRUNING.—Every cultivator of fruit should thoroughly examine his orchard and fruit garden, before he is interrupted by the approaching busy season. Those who have large trees should give them the necessary pruning. A slight trimming every year or two, is much better than the more frequent practice of heavy pruning after years of neglect.

The work should be done as early in the month as possible, that the wounds may become well dried before the sap flows. There is more judgment and care needed in pruning large trees than in any other part of their management. The operator should constantly bear in mind, that a neat, handsome head is to be preserved; that the best shaped and most thrifty branches are to be left; and that the light of the sun should be admitted as far as practicable to all parts of the tree. A thrifty growth of the branches will thus be kept up; and in connexion with good cultivation of the soil, the fruit will possess the large size, and fine flavor and appearance, so eminently desirable, and usually seen on young trees. The advantages of admitting the sunlight must be obvious to every one who has noticed the difference between the rich flavor of fruit fully exposed to the solar rays, and that which has grown under a thick mass of branches and leaves. Indeed, so important is this influence, that the exposed side of an apple is often found much richer in flavor than the shaded side—the rich acid of the Esopus Spitzenburgh, and the sugary sweetness of the Tallman Sweeting, are most strikingly observable under the dark red surface of the one, and brown sunny cheek of the other.

Large wounds made in pruning, should be protected by a suitable air-tight and water-proof coating, otherwise they will dry and crack, admit rain, and finally become diseased from decay. The cheapest good coating is a mixture of tar and brick-dust, applied hot; the best and neatest, is a thick solution of gum shellac in alcohol, kept corked tight, and applied with a brush.

PRUNING PEACH TREES.—Pruning the peach is very little practiced, simply because its great advantages are generally unknown. Most cultivators, however, must have noticed the great difference in the size of the peaches, and still more in their quality, grown in one case upon young and thrifty trees, and in the other, on old and stunted ones. Old trees might be rendered thrifty, and productive of large delicious fruit, if a regular system of pruning were kept up. The tendency in the growth of this tree, when neglected, is to form long and bare branches, with leaves and fruit only at the extremities, shutting out the light from the rest of the tree, and attended with slow and diminutive growth. Judicious pruning, by shortening-in, commenced while the tree is yet young, and continued yearly, will preserve a round, handsome head to the tree, and young and thrifty shoots will start from all parts of the branches, even down to their very commencement, at the upper extremity of the trunk. Old trees have, in some instances, been much benefitted even by the rough and unskilful trimming by the winds, and new and healthy branches have sprung up and borne finely on old and stunted trees, which had been thus accidentally relieved of a part of their useless limbs. A. J. Downing says:—"We have seen two peach trees of the same age side by side, one unpruned, and the other regularly *shortened-in*, and both bearing about four bushels. The fruit of the latter was, however, of double the size, and incomparably finer." A similar experiment, made



A neglected and unpruned Peach Tree. Fig. 23.

A properly pruned Peach Tree.—Fig. 24.

the past season by the writer, was attended with quite as great success. Fig. 23 represents a neglected and unpruned peach tree, the leaves and fruit being at the ends of the branches. Fig. 24 is a tree properly pruned, so as to admit light to all parts. The pruning should be done early in the month.

RASPBERRIES.—These should be pruned as soon as the surface of the ground becomes thawed in spring. All the old stems, and all the smaller young shoots, should be cleared away to the ground, and about half a dozen of the largest stems of last year's growth left for bearing. Their upper extremities for a foot or two should be cut off, being weak and useless, and detrimental from their weight and shade. The remaining stems, if not of a stiff and upright variety, should be loosely tied to stakes.

HARDY GRAPES need pruning early, before the sap flows and *bleeding* commences. A moderate bleeding need not be feared, but if profuse, it is detrimental. The sooner the work is done in the month the better. The Isabella, Bland, Catawba, and other American varieties, are of such rampant growth, that when only a few years old, they bear most abundantly, and hence the inexperienced cultivator concludes that pruning is not necessary, and that they do better without it. A most erroneous conclusion—for the vines by such neglect soon become a mass of thickly matted stems and branches, their vigor is exhausted, and diminutive crops of poor fruit is the result. But by good pruning they may be kept in perennial vigor and undiminished productiveness.

The great leading rule to follow, is to keep the old wood down as near the ground as possible, and to let new and vigorous shoots, spring up, from the bearing branches, which must be thinly and evenly distributed over the trellis. If these requisites are strictly attended to, heavy crops of fine fruit will many times repay the attention given, whatever be the particular mode adopted; although the method of training horizontal arms, to sustain upright and parallel bearing shoots, is the most systematic and convenient, as represented in the annexed figure. Two different ways of management for this method have been practiced. The first is to allow the old horizontal arms to remain, but to cut down to one good bud, every year, every alternate upright branch, that a new one may spring up in its place, thus renewing these uprights every year. The second is to let the uprights remain several years, only pruning-in yearly their laterals, to a single bud each. An acquaintance, who is wonderfully successful with the Isabella grape, successively buries in the earth the old portion of the vine, so that young and vigorous stems are at all times only visible; and by careful and clean pruning, he raises enormous crops—some of the bunches of Isabella grapes being eight inches long, and in one instance a single branch of one year's growth, bore the following season eighty pounds of fruit.

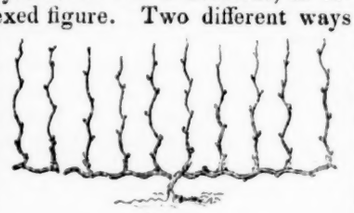


Fig. 25.

GRAFTING.—Grafts should be cut early in the month. No pains should be spared to procure them from the best sources—the difference between a good and bad scion for a single tree, may make a vast difference in the value of the crop in future years. Grafting is a simple operation; and every careful farmer, or his son, may do the work for himself, and more satisfactorily than to employ others. The grafting wax may be prepared in different ways. The cheapest composition is made of one part, by weight, of beeswax, two of tallow, and four of rosin. More beeswax and less rosin adds to its cost, but renders it less adhesive to the hands. Three parts of rosin, three of beeswax, and two of tallow, constitute an excellent grafting wax. It is applied by spreading it, while just melted, with a brush over a thin newspaper, which is cut up with a knife when quite cold, in plasters of convenient size; or it is spread on cheap calico or muslin; or it is worked with wet hands till it may be drawn out in strings or ribbons, when it is alone wound round the grafted part; or it is applied alone, while just melted, to the part, by a small brush. Either mode of using is good, provided that the wax when used is warm enough to bear pressure, and cause adhesion closely on every part, and leave no vacant cavities. In cold weather a lantern or chafing-dish will be needed for this purpose.

The operator may suit himself as to the peculiar mode of grafting. But it is very essential to have sharp tools; to have the parts in close contact by pressure; that the outer edges of the wood (and not the outside of the bark) in the stock and graft, may exactly coincide at one point at least; and that all cut parts be excluded from wet and air by wax well applied. Cherry and plum trees should be grafted very early; apples and pears, later.

To prevent confusion in names, only one variety should, if possible, be set in each tree, and the name and number in the row be immediately registered in a book for future reference. No one should think of trusting to memory for the name of a single sort.

BUDDED TREES.—Trees in which buds were inserted last summer, should now be headed down to the bud, that it may grow freely by receiving all the sap. To cause the new shoot to grow straight, leave two or three inches of the stock above the bud; to this the new shoot is to be closely tied as soon as it is a few inches long, and so remain till mid-summer, when the stump is to be pared down closely to the bud.

FRUIT TREES which lack vigor of growth, should be stimulated with a good coating of old manure, spaded in as soon as the frost leaves the ground. All fruit trees, except of the largest size, which do not stand in ground kept constantly cultivated by the hoe, should have a circle, *several feet* in diameter, spaded around them. Soap-suds, especially for peach trees, is fine. All trees are benefitted by it.

ORCHARD CATERPILLARS.—Take them early, and their destruction is easy; let them flourish for awhile, and it is exceedingly difficult. Their eggs are now found in nests or rings of several hundred each, near the extremities of the young shoots, and at a few feet distance appear like small knobs on the branches. They are now quickly clipped off and burned; every one thus removed preventing a large nest of voracious caterpillars. As soon as the buds begin to open, they hatch, and remaining for a few days in their small nests, give them a conspicuous downy appearance; when the remainder, if any should chance to have been left, should be speedily removed and destroyed, as they will soon increase rapidly in size and mischief.

Caterpillars' Eggs.
Fig. 26.

PREPARING FOR TRANSPLANTING—Those intending to transplant fruit trees, should have the ground well prepared in season, by digging ample holes, and preparing the soil in the best manner. Let the holes be six or seven feet across, and all the outer portions, or

those not to be in immediate contact with the roots, filled beforehand, if convenient, with a mixture of old rotted manure with soil. This will give the young trees a vigorous start until they come into bearing; and in the meantime the ground should be gradually enriched around them by manuring the crops. It would be still better, if the ground for the young orchard could be for two years previously well prepared for trees, as follows:—First, run the subsoil plow as deeply as possible, to loosen the soil for the entrance of the common plow for trench-plowing, the latter operation for the purpose of working manure deeply below the surface, and for intermixing thoroughly the surface soil, subsoil and manure. Two years of such cultivation, with carrots and other roots, will bring land to the finest order, and even one year would be eminently useful.

Cultivation of the Apple.

Having been practically acquainted with the Apple tree for more than thirty years, and being anxious to see this tree more successfully cultivated, I am constrained to give publicity to my observations, experience, and mode of culture, hoping that some may be instructed, and the attention of others awakened to this interesting subject.

The apple tree is the most valuable fruit tree that grows in this part of the world—is naturally very long lived, very productive, and easily cultivated, requiring but little more attention every year than a hill of corn; and yet, strange as it is, there are not half enough good apples produced for family use.

Trees may be procured of the nurserymen, or be raised on your own premises. If the latter course is taken, procure as many seeds as you want from the kind of apples you wish to produce. They will not all of them produce the same kinds—a few will be the same or similar, and others new varieties—nearly all will be very good, if the seeds were of good kinds. Plant your seeds as soon in the spring as the frost is out, in good mellow ground, about a quarter of an inch deep, in rows about two feet apart, and about six inches apart in the rows. Keep the ground mellow and clean, and in about three years they will do to set in their abiding place, or to graft.

Trees of natural growth generally last the longest. In the selections of the kinds you prefer to graft, do not disregard those that are uniformly good bearers, and prefer grafts from young healthy trees. Cut the last year's growth with an inch or so of the year before, if you wish to keep them awhile. If you cut at all from an old tree, take a last year's sprout, well matured. The nearer the time of running of the sap the better, but if most convenient, they may be cut and kept in a moist place some weeks. As soon as the sap runs, remove the soil from around the tree about an inch deep, insert your graft smoothly, and bring the soil around it about an inch above the insertion. In about two years your trees will do to set in their abiding place.

In selecting a place for an orchard, prefer upland or hill-sides. The fruit will be richer, higher flavored, and more abundant, than on low, flat lands. Almost all kinds of soil will do, if they are deep, rich, and well cultivated. In this vicinity, the soil called *iron-stone* is lately the most productive. It is believed by some that an eastern exposure is liable to blast; but I have not found it so.

Dig the holes for your trees a little larger than the extension of the roots, and about eight or ten inches deep. Take up your trees carefully, without breaking the roots, and the sooner they are set in their places the better. Set them just about as deep as they were in the nursery, filling the holes with just what was taken out and nothing else. Many trees are greatly injured by being set too deep. Set a stake about a foot from the tree, leaning to it, of equal height, and tie the tree loosely to the stake. Plow or dig the soil mellow, around the tree, two or three feet from it at least, in the spring of every year, to the depth of three or four inches, but not to injure the roots.

In cultivating your orchard, a good arrangement, is to plow one or two years, and leave the ground one or two years in clover—keeping the soil rich with manure. This mode is much better than to put heaps around the tree, and bury the roots too deep. Just before the sap runs, every spring, prune, but in doing this, be careful not to prune too much. I have seen a great many orchards nearly ruined by pruning too much. The supposition that more sap and nutriment is obtained by the remaining branches when some are removed, is a mistake. The branches constitute a part of the tree, and do their office in furnishing nourishment just as much as the roots. The lower limbs of the top should be about four and a half feet from the ground; and here let a full and natural top be commenced. I have never known a very large tree, nor a good bearing tree, among those that had high tops, either by cutting off the lower branches, or by trimming them up high.

A great many apples are lost by leaving them too long on the trees. Winter apples, as soon as the seeds are ripe, should be picked, and taken to a cool, dry, shady place, spread thin, and lay without cover, until there is danger of freezing. When there is danger of this, remove them to their winter quarters, which should also be cool, just so as to avoid freezing. Put them on shelves, not more than two or three courses thick, and if put in a cellar, the shelves should be at least three feet high from the bottom. Leave them uncovered, and remove the decayed ones, as occasion requires, and in all that you do, be careful not to bruise them in the least. I have kept Newtown Pippins in this way until August. R. K. Tuttle. *Morristown, N. J., February 4th*, 1848.

Productiveness of Strawberries.

In all the long discussions about barren and fertile strawberries, the actual amount which each variety will yield per acre, which is of great importance, appears to be entirely forgotten. To one who raises for market, it is quite essential to select such a variety as will yield a surplus of a hundred per cent. above the cost of raising, rather than one that will yield no such surplus at all; and the home cultivator wishes to get as much from his labor and land as practicable. Only a few statements of the amount per acre have ever been made. Hovey's Seedling, it is said, has yielded 2,000 quarts, or more that 62 bushels per acre. The Old Hudson, (of Cincinnati,) which is probably the most productive of all strawberries as yet much cultivated, has produced, according to Nicholas Longworth, at the rate of 5,000 quarts, or 156 bushels per acre. Burr's Late Prolific, a new variety lately originated at Columbus, Ohio, it is stated yielded 35 quarts on a bed 6 feet by 20, which is about 240 bushels per acre; it doubtless received the best possible culture. It would be very interesting and of great value, to know the comparative productiveness of such varieties as Hovey's Seedling, Large Early Scarlet, Ross' Phœnix, Swainstones' Seedling, Black Prince, and others, raised side by side, and treated precisely alike. Such experiments would greatly facilitate the selection of the best sorts, for each different part of the country.

Moss on Fruit Trees, may be removed by soap-suds, thin whitewash, or a mixture of cow-dung, urine and soap-suds.

Grafting the Tree-Pæonia.

LOUDON, in his Surburban Horticulturist, describes a mode of grafting the fine varieties of the Tree Pæonia on the roots of the common herbaceous varieties. According to his method, the work is done at midsummer, and the grafted roots inserted in a bed of tan, to be taken up and potted after they have thrown out roots by mid-autumn, and placed in a cold frame to remain through winter.

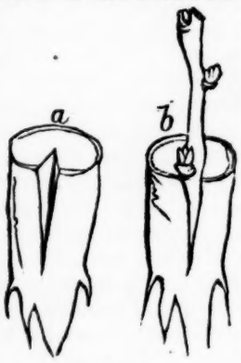


Fig. 26.

The writer has been successful by performing the work early in the spring, before the buds of the graft have started. In the annexed figure, *a* exhibits a portion of the root of the common double crimson pæonia, not split, as in common cleft grafting, but with a long acute notch cut out of the tuber with a sharp knife. The graft is cut so as to fit this notch exactly as represented at *b*. It is then secured by bass and covered with wax, and placed in fine rich mellow earth, even with the upper bud of the graft. The Tree Pæonia, as is well known, is of very slow increase, and is usually sold at a dollar or two a plant. The roots or tubers of several of the herbaceous varieties may be had in abundance. In the experiments already performed, most of them have grown and done well; but the work must be done as early in the season as practicable, and before the buds have swollen, which usually takes place very early in the Tree Pæonia.

Fire Blight—the Columbia Pear.

The remarks on these two subjects, under the Horticultural head last month, not having been seen by the editor of this department till after publication, he wishes to remark, in addition to what is there stated relative to the pear blight—that he is fully confirmed from past observation, that the *immediate* cause of this disaster is in some seasons chiefly the *hot rays of the sun*. It is however not at all improbable, that there may be a predisposing cause independent of this, but this latter must remain for the present somewhat involved in conjecture. Some notice of the observations leading to the belief in the destructive influence of solar heat, were published in the first number of the current volume.

It may be proper, in connexion with this subject, to point out a single error in the remarks of a highly intelligent correspondent of the Horticulturist, where he attributes *scalding of the sap* to the concentration of the sun's rays, "by the shower drops of water suspended in the tree, *forming so many lenses.*" Now, the diameter of a water drop is scarcely the tenth of an inch; its focal point is only about one half its diameter from the drop, or the twentieth of an inch. It is hardly admissible to suppose that these drops hanging in the tree, should be situated just the twentieth of an inch from the trunk. If the distance were only the twentieth of an inch more, the rays instead of being brought to a focus, would be widely dissipated. Again, in a lens of so short a focal length, the diameter of the focal point would be less than one thousandth part of an inch—so exceedingly small as not to possess any effective power in heating even the epidermis.

The *Columbia Pear* has borne for several years in Western New-York, and the quality of the fruit has corresponded precisely with that of specimens received from Massachusetts. It is a vigorous, productive and very handsome pear—there is scarcely a variety that will compare with it in handsome, rounded, symmetrical form. This, with its large size, must have given it chiefly its high fame, for we have never been able to place it higher for quality than second rate. It is to be presumed that the high commendations bestowed upon it in the "Fruits and Fruit Trees," must refer to specimens ripened farther south or in the neighborhood of New-York city.

Abstract of Remarks on Various Pears,

DESCRIBED IN THE FIRST VOL. OF THE HORTICULTURIST.

The following abstract of remarks, in the first vol. of the Horticulturist, on various pears, was made out originally for my own information and convenience. Thinking it might be quite as useful to many others as to myself, I concluded to send it to you for publication. It embraces the substance of all that has been said on most pears of note, by the experienced gardening and pomological contributors of that valuable journal, during one year.

Opinions relative to the same variety of fruit, vary essentially in different sections of the country, and even in the same neighborhood. By placing these different opinions, as far as they have been elicited, side by side, the inquirer by comparing them, can more easily arrive at its true merits. With the name of each writer, wherever it first appears, I have given his place of residence. Thepears are arranged in alphabetical order. The figures in brackets refer to the page of the Horticulturist. At the conclusion of the remarks on each pear, I have added its time of ripening, from Downing's "Fruits and Fruit Trees."

ANDREWS—This pear Cheever Newhall of Dorchester, Mass. (415) considers a fruit of the very first merit. J. J. Thomas of Macedon, N. Y. (480) says it is a fine pear—a great and early bearer—fruit handsome; but only second rate in richness, and drops from the tree usually before it is sufficiently matured to ripen well in the house. Early in Sept.

BARTLETT—Mr. Downing says of this pear (13)—"The Bartlett pear from its unusual productiveness, size, excellence and beauty, as an early fruit, added to its vigor as a tree, and the rapidity with which it comes in to bearing, has actually been the object of a sort of mania among those largely engaged in pear planting, within the last three years." Col. Wilder, Mr. Johnson and Mr. Ives, (278) all near Boston, coincide in declaring this to be "all in all," "*the best* summer pear." Downing in speaking of it again (279) says: "The Bartlett is almost a universal favorite. This is owing not simply to its size and good quality, but also to its regular productiveness, joined to its invaluable habit of adapting itself to every soil, and bearing while the tree is yet very young." Last of August, and September.

BELLE DE BRUSSELS—This is a fine, early, French pear, but recently introduced into this country. P. Barry, of Rochester, N. Y., (446) thinks it unsurpassed by any summer pear of native or foreign origin that he has yet seen. "The tree," he says, "is vigorous, its growth is compact and straight; it is prolific to a fault." Fruit large. Middle of August.

BEURRE BOSC—Downing says of this (13)—"Among autumn pears, the Beurre Bosc proves, year after year, equally deserving of praise. Its branches are regularly laden with large fair and beautiful specimens, which ripen gradually, and always attain a delicious flavor. With many sorts of pears, it is unfortunately the case that only one fruit in ten is a really fine specimen. With the Beurré Bosc, it is just the reverse; scarcely one in ten is blemished in appearance, or defective in flavor. It is, in short, a standard fruit of the highest excellence,

worthy of universal cultivation." Robt. Manning of Salem, Mass. (279) considers it, taking every thing into consideration, the best fall pear. October.

Beurre d'Aremberg—Downing remarks (13) that —"This is now unanimously acknowledged by our best cultivators, to be the *first of winter pears* for this climate. The tree, hardy, uniformly productive, and holding its fruit well; the fruit itself high flavored, maturing perfectly in all situations, and always keeping and ripening admirably." Col. Wilder (19) says—"as a constant, prolific, hardy sort, the d'Aremberg is unsurpassed, and whether on pear or quince stock proves admirably adapted to this climate. It is a fruit easily excited to maturity, and may be brought into eating even in November, or retarded until March." Col. Wilder, Mr. Walker, and Mr. Johnson, near Boston, and Mr. Downing, (278) concur in naming this as the most valuable winter Pear. December to January.

Beurre Diel—Cheever Newhall (415) recommends the Beurré Diel for strong rich soils. September to December.

Beurre Easter—M. P. Wilder writes (22)—'this variety has generally proved so variable and uncertain that it cannot, from our experience at present, be relied upon. It, however, succeeds better on the quince." Cheever Newhall (416) considers it a pear of first quality when well ripened, and will keep with care until May, but is, with me a shy bearer, and often does not come to maturity." J. J. Thomas raises a similar objection (480)—"the fruit rarely attaining perfection under ordinary management." January to April.

Bloodgood—J. C. Lee, of Salem, Mass. considers this the best early pear. (279) Cheever Newhall (415) says of it—"This pear may be good in some soils, but I have never succeeded in raising one that could be classed first quality." Downing says (415)—"this is uniformly the very best early pear here." (Newbury.) J. J. Thomas writes (480)—"The Bloodgood proves to be a decidedly first-rate pear; no one preceding or ripening with it, proving its equal in all respects." Beginning of August.

Catilac—Cheever Newhall (415) considers this, the best winter *cooking* pear. "It is very large, stews very tender, and is then of rich color and superior flavor." November to March.

Columbia—M. P. Wilder says—(20) "This excellent native variety has proved with me a fruit more uniformly smooth, perfect shape, and free from the depredations of insects, than almost any other sort. The tree is thrifty and hardy, not prolific when young, but a great bearer on mature subjects, the fruit being regularly distributed over the branches, and of a very uniform size." J. J. Thomas (480) says—"The Columbia bears very fine crops of large fair fruit, but drops too early from the tree." November to January.

Cushing—The only remarks in relation to this pear, are by Cheever Newhall (416) who says—"The Cushing, a native, is a good fruit, but ripens with the Bartlett and is inferior to it."

Dearborn's Seedling—Downing says of this variety (13)—"It is not a large pear, but it is one of most excellent flavor, and bears such regular and abundant crops, that its moderate size is amply compensated for by its abundant quantity. It is always best when ripened in the house, and bears transportation to market well." J. J. Thomas writes, (480) "Dearborn's Seedling is one of the best—nearly equal to the Bloodgood, but smaller." Mid. of August.

Dix—Cheever Newhall (415) remarks—"The Dix pear sometimes, in this neighborhood, cracks in exhausted soils, but is a noble and delicious fruit, not surpassed in my estimation by any other pear known. October and November.

Doyenne Gray—J. J. Thomas is the only writer in first vol. of the Horticulturist who refers to this pear. He says (480)—"were I compelled to choose but one variety, as best, for its delicious flavor, I should perhaps select the Gray Doyenné." Mid. October.

Doyenne White, *or Virgalieu*—Wm. C. W., Baltimore writes, (144)—"The white Doyenne pear which some have said is an outcast, flourishes on my father's estate as with you, in all its original vigor. * * * On the 4th October 1844, dining at Rouen, (France) I found at the depot the handsomest specimens of the White Doyennè I ever saw, looking and tasting as though they had been grown on trees as healthy and vigorous as the Seckel." The same writer says again, (197) that in November in Paris, "the pear preferred above all others was the White Doyenné far excelling some dozen varieties then in season, both in beauty and quality," Downing (279) recommends this as the best *fall* pear for all gardens north and west of Newburgh. Cheever Newhall (416) says—"With me it succeeds well when engrafted on quince stocks, but is worthless on pear stocks." J. J. Thomas remarks (480) that it maintains with him the high character given of it elsewhere. September to December.

[We are obliged to defer the remainder of this Descriptive List of Pears, from our correspondent, F. J. Scott, Esq., Toledo, till our next.—Eds.]

Budding in the Spring.

In the spring of 1845, I cleft grafted an apple stock that was about two inches in diameter. The grafts grew well until the summer of 1846, when they were blown off by the wind, in place of which quite a number of sprouts came out. On the 11th of May, 1847, I inserted four buds in the usual manner, taken from scions cut early for grafting, with the most perfect success. The largest of which is now three and a half feet long, and an inch and a half in circumference at the base. Alfred Young. *Gustavus, O., Jan.* 14, '48.

Blight in Pear Trees.

A valuable tree of Fall Butter pears was much affected in 1846. A part of the bark was removed in the 6th month, care being taken to avoid bruising the ligneous formation. The tree revived, and in 1847 appears more thrifty. A younger tree also showed the affection. The bark was removed entirely from the body. The disease has disappeared, and the tree is thrifty, and is now heavily laden with large grown fruit. I do not say it was affected by "hiding" the trees, but do not know what else to attribute it to; and have seen cases in apple trees where it materially helped them. R. H. *Richmond, Ind., 10 mo,* 1847.

The Paulownia.

This new and famous shade tree, as is well known, is remarkable for the large size of its dark green leaves. A young tree, in moderately rich soil, on the grounds of the writer in Macedon, bore one leaf measuring over 25 inches wide, and about as long, and several others nearly as large. The soil was *well cultivated*. On other land as rich, but little cultivated, within the same enclosure, the leaves were scarcely six inches in diameter.

Correction.—In the description of the Primordian plum, last number, for "marked" read *necked*,—the fruit possesing a slight neck like a pear. Page 53, 1st col., for "Fortunes," read *Fortunèe*.

Balsams.—A correspondent of the Gardener's Chronicle states that seed three or four years old, saved from double varieties, is pretty sure to give double flowers; whereas one year old seed is almost certain to produce single blossoms.

MEMOIR OF ELKANAH WATSON.

ELKANAH WATSON, always a private citizen, occupied for many years a prominent position in sociey. A life, protracted far beyond the ordinary term allotted to man, embracing the thrilling period of the Revolution, and intimately associated with many prominent actors in its scenes, in both hemispheres; occupied in the agitation of varied subjects of public improvement and popular interest, and in the discussion and controversies incident to them, must necessarily be fraught with incident and topics which cannot adequately be exhibited in our limited columns. We can scarcely present more than a naked synopsis of some of the prominent events of a peculiarly active and variegated career, with a little detail of the eminent services of Mr. Watson in the promotion of agricultural improvements. Mr. Watson was born in Plymouth, Mass. He traced his lineage to the pilgrims of the Mayflower, being descended from the first marriage, as is supposed, solemnized in New England. The qualities of his puritan ancestors, enterprize, an active and inquiring mind, and an ardent love of liberty, were strongly impressed upon his character. In accordance with the usages of those days, he was withdrawn at an early age from school, and placed with John Brown, of Providence, then among the wealthiest and most eminent merchants of the Colonies. The agitating scenes of the revolution aroused all the sympathies of Mr. Watson, who was repeatedly under arms during the contest. His memoirs contain a glowing and graphic account of probably the first cruise of a colonial vessel, in avowed opposition to the flag of England, in which he was engaged with a design to intercept and rescue Mr. Brown, a prisoner under arrest by the government, in his passage from Providence to Boston. In the service of Mr. Brown, and intrusted with a large amount of funds, he travelled in 1777, on horseback, from Boston to Georgia. Passing almost along the line of the military operations of the war, his journals exhibit a most exciting picture of the spirit and incidents of the times. On his return from the south, Mr. Watson sailed for France in a packet, bearing despatches to Dr. Franklin at Paris. With much difficulty and hazard they evaded the British cruisers, and safely reached La Rochelle. He remained several years in France, residing principally in the city of Nantes and at Paris. In the intervals of his business avocations, he travelled extensively in France, Flanders, and Germany, and always, as his journals evince, with an eye of careful and attentive observation. He ever afterwards cherished the most kind recollections of France, and the warmest sympathy in all her interests. While in Paris he enjoyed a familiar intercourse with Dr. Franklin, and in common with all who approached the illustrious patriot and philosopher, was fascinated and delighted by the wisdom of his tongue, and the benignity of his heart. During his residence in France, Mr. Watson became acquainted with John Adams. A close and uninterrupted intimacy of more than half a century subsisted between them, cemented by a frequent intercourse of a confidential correspondence. The letters of Mr. Adams are of a highly interesting character, and portray the sagacity of his mind, and the lofty devotion and fervor of his patriotism. Mr. Watson proceeded in 1782, to London, as bearer of despatches from Dr. Franklin. In that capacity, and by the influence of letters from Franklin, he was brought into personal association, not only with Burke and others of that galaxy, which then shone in the British Parliament, but also with Priestley, Price, and other distinguished philosophers of England.

Moving in a sphere so elevated and so intellectual, Mr. Watson enjoyed the most favorable opportunity of observing the institutions, the men, and the affairs of the Old World. His habit of viewing society was thus enlarged, and his mind expanded and improved. He traversed various sections of England and Wales, and although yielding to the strong and bitter feelings of hostility fitting an American patriot at that epoch, against the government, he seems to have been amazed and delighted in witnessing the progress of England in the arts of peace. He also made a hasty tour through Holland, which was the basis of a future publication. The canals and internal improvements of these countries, their beauty and vast agricultural resources, appeared particularly to have attracted his attention. He carefully examined their public works, and from the mere curiosity of an observing traveller, procured data of expenses, plans, &c., which, at a subsequent period, he applied to the most important practical purposes. The rural beauties that every where charmed his eye, first probably excited an interest and desire for agricultural pursuits; whilst the high degree of improved culture, and the successful application of science, he saw, strongly contrasted with the primitive system, or want of system, to which he was accustomed in America. His observations on these subjects created an enduring conviction of the importance and necessity of these improvements to his own country, and aroused an enthusiasm for their promotion, that glowed to the latest period of his life.

Seed thus fortuitously sown in Europe had, after the lapse of many years, their fruition in America, in the efficient and untiring zeal with which he devoted himself to the advancement of numerous schemes of local and public improvement, and the great interests of agriculture. Mr. Watson had the peculiar, and to a high toned and ardent American, the grateful privilege, of hearing from the lips of the king of Great Britain, before the Imperial Parliament, the recognition of our national existence. He always alluded to that event as the proudest hour in his life. In 1784, he returned to America, with an increased attachment for the manners, customs, and institutions of his native land. Soon after his return Mr. Watson again proceeded to the Southern States, and resided for some years in North Carolina. On his tour southward he visited Mt. Vernon, and we deeply regret we cannot extract from his journal an incident, that exhibits a beautiful trait in the lovely and harmonious character of Washington. The journals of Mr. Watson during his southern residence, afford an interesting portraiture of the manners and customs at that period of society at the south. In the practice, from early youth, of recording the events of his own life, and the incidents around him, with the opinions and feelings excited by them, he has left MSS. which range over a period of more than half a century, and are a rich source of valuable and curious information.

In 1788, he became a citizen of Albany, and at a very early day began the agitation in that city, of various subjects of local improvement. Among other schemes which engaged his attention for a series of years, and which he sustained through the press and by personal efforts, we may enumerate the paving of the streets—a supply of water—a public library—the introduction of lamps—the organization of the Bank of Albany—a turnpike between Schenectady and Albany. In the same year, Mr. Watson travelled along the valley of of the Mohawk to Fort Stanwix, at that time on the very confines of civilization. The policy of a union of the waters of Lake Ontario and the Mohawk, and the improvement of their navigation, seemed to have suggested itself to his mind, with a deep impression of its importance and facility. His views on this subject were matured and strengthened by subsequent observations made in a tour through the same region three years afterwards. The result of these convictions was earnest and continued appeals to the public and the legislature, urging the adoption of a specific system of internal improvement. "Who initiated the canal policy of the State," it is not our province to discuss, but we may assert, that the efforts and suggestions of Mr. Watson, were peculiarly efficient in originating the canal law of 1792. He was a director, and among the most prominent and active agents of the company formed under that law.

A society was organized in 1792, through his exertions in Albany, offering rewards to promote the manufacture of maple sugar, and an attempt was also made to procure, from the legislature, an act for the same object. The fact, trifling in itself, is interesting, as it presaged the future labors of Mr. Watson for the advancement of agricultural interests. Soon after, he drafted and circulated a petition to the legislature, and was primarily instrumental in providing a law establishing in New-York a state prison, upon the hard labor system.

In 1807, Mr. Watson purchased a beautiful seat, with an extensive farming establishment attached, situated in Pittsfield, Mass. To this place, in one of the most picturesque and delightful regions in New England, he retired, in pursuit of those rural scenes and enjoyments which for twenty years had been his warmest aspiration. The county of Berkshire, always distinguished for the beauty of its scenery, was not then one of the garden spots of New England. Its farms were not fertile, were generally cultivated with little care or science, and the stock were of an inferior quality. This was the scene of Mr. Watson's agricultural labors, and the great field of his usefulness. The Agricultural Society of that county, which was mainly founded by his unwearied efforts, is an enduring monument of his devoted patriotism and fervent zeal. Although practically ignorant of all agricultural pursuits, he enlisted in his new vocation with all the ardor and engagedness that marked his character. The coarse wool sheep and primitive swine first attracted his attention, and his inititory measure in his career of improvement, was the introduction of a pair of fine grade Merino sheep, from the flock of Chancellor Livingston. These were soon succeeded by two grass feed swine from the same vicinity. The merit may be ascribed to him of having, within the first year of his residence in Berkshire, by the introduction of these animals, laid the basis of that branch of agricultural interest, which has proved one great element of the wealth and prosperity of that county. These sheep were the first Merinos that had been seen in the region, and their appearance excited much curiosity and discussion. To gratify the one and arouse the other, Mr. Watson, in pursuance of notice, exhibited them on the public square in Pittsfield, for general inspection. The occasion assembled a considerable number of farmers and others, who were surprised and delighted with the animals, and with the quality and texture of their wool. This novel and humble exhibition he states, created universal interest, and suggested to his mind those cattle shows which were soon established in the county. The wool from these sheep he caused to be manufactured into cloth, by the most skillful artists the country then contained. The work far excelled any previously produced, and probably was the inception of those woolen manufactures that now compete with the choicest fabrics of Europe. The incident was announced by the press throughout the country, with a detail of the expense of manufacture, the quality, &c., of the cloth, and samples of it even, were exhibited in our chief cities. We may here add, that just previous to the war of 1812, Mr. Watson selected sufficient of his finest wool for two coat patterns, and had it manufactured in the most per-

fect style our improved artisans could give it. One he sent as a tribute of patriotism to Mr. Madison, and the other he transmitted, as an evidence of our triumphant progress in the arts, to the Prince Regent of England. At an early day Mr. Watson introduced the subject of an Agricultural Society, and personally, as well as by constant discussions in the newspapers, pressed its formation. His exertions in the outset, with the mass of the community, met with little favor or consideration. The practical farmers, with few exceptions, derided his schemes, and turned a deaf ear to his solicitations, as the mere dreams of visionary speculation. Unyielding zeal, the sagacity of some, and the intelligence of the mass, ultimately triumphed. Many who were the most violent in their derisions and opposition to his project, lived to feel their error, and to give to the society their most hearty and vigorous support. In 1810, a feeble and sickly manifestation was made in an attempt at an organization. This, however, the next year expanded into an exhibition, affording the highest interest and gratification. Mr. Watson, on the first anniversary of the society, delivered an address before a crowded and interested audience. A feeling was aroused that has never since that day slumbered. The success of the effort was no longer a problem. The progress of the society has continually been onward, expanding in influence and usefulness. Its anniversaries have become festival days of the county. Its form and plan have been made the model throughout the Union, wherever similar institutions have been organized. Its vast and most beneficial effect upon the agricultural condition of that county, none can hesitate to admit.

In 1816, Mr. Watson abandoned his rural pursuits, his flocks and herds, and returned to his former residence in Albany. He soon became involved in the agricultural movements in this State. The following year he aided in the formation of a society after the Berkshire model, in Otsego county, and for several successive years was constantly and vigorously engaged in the organization of similar societies in this and the adjacent States. He struggled during this period with unremitted efforts, to induce the legislature to extend to them, and kindred interests, the fostering hand of government patronage. At an earlier period a National Board of Agriculture, had been with Mr. Watson a cherished project. He was the author of an elaborate report, presented by the Committee on Agriculture of the New-York Assembly, in vindication of this policy, which attracted much attention and was generally diffused. Although without pretension to scientific attainments, the opinions and suggestions of Mr. Watson were continually solicited from various sections of New-York, and the adjoining States, in reference to numerous questions of internal improvements.

Our space will not premit us to present any detail of the system or theory of the Berkshire Society, and can only refer to Mr. Watson's history of that society, published in 1820, for a full exposition of its plan and operations. Other associations for agricultural improvement had no doubt previously existed; but we believe it is conceded, that the model and general features of the Berkshire system were peculiar and original.

The addresses delivered by him before various agricultural societies were of deep interest, and fraught with judicious scientific and practical suggestions. During the last residence of Mr. Watson in Albany, he opened an extensive correspondence with our foreign public functionaries, for the purpose of procuring, by enlisting their services and zeal, new and useful varieties of vegetables and grain. He thus became the medium by which the seeds of many important and valuable agricultural productions were introduced into the country. The staple grains of some sections of this state, still successfully cultivated, may be traced to these efforts.

Mr. W. was an ardent and efficient promoter of popular education. The interests of colleges, academies, and common schools, continually engaged the services of his pen, and his individual exertions. He was an early and active advocate of the cause and privileges of Union College. The Lombardy poplars, that formed the academic grove which enveloped the old college edifice, were transmitted personally by him from Albany, and many of them planted by his own hand.

His mind and eye were ever intent on subjects of public improvement, and prompt and vigilant in their development. Whilst a sojourner at Poughkeepsie for a few months, he devoted himself to arouse the public mind to the consideration of various questions of general and local interest. The project of a turnpike road from New-York to Albany at that time occupied his attention, and was urged with his usual ardor and determination. Passing through Buffalo, on a journey to Detroit in 1818, he saw the extreme necessity of more extended commercial facilities at that place; and on the impulse of the moment devised a plan for a harbor which he submitted to the proper authorities. The plan subsequently adopted was almost identical with that he suggested; whether his was the original conception, we cannot assert.

Although fervent and enthusiastic in his patriotism, a warm admirer of our political institutions, and a firm believer in their perpetuity, Mr. Watson rarely engaged in the mere party politics of the hour. His essays and speculations on political subjects were numerous and diversified, exhibiting no ordinary sagacity and observation. In 1782, whilst at London, he earnestly and with great boldness, in the avowed character of an American citizen, advocated in the public press of that city, the rights of the colonies to their independence, and urged the policy of its recognition upon the government.

He again removed from Albany in 1827, and resided the remainder of his life at Port Kent, a village upon Lake Champlain of his own creation, and the principal avenue to the immense manufacturing region embraced within the valley of the Ausable. Here a new field was presented for his patriotic labors, and although verging upon three score and ten, Mr. Watson entered upon it with renovated vigor. We will only indicate, as an evidence of his active usefulness, the law for a public state road from Port Kent to Hopkinton; a railroad from Lake Champlain to the St. Lawrence, and another from Champlain to Boston. Each of these was either the original conception of his own mind, or was powerfully promoted by his agency. The powers of his mind were unimpaired, and his intellectual industry unabated, to the last days of his life. His thoughts were occupied on these subjects even amid the last throes of nature. Just before his decease, and when unconscious of all external objects, he inquired for one who then stood over his bed, and added, "ah, yes, I know, he is gone to ——, after that railroad bill," and then, in the delirium of approaching death, he exclaimed with the strongest emphasis, and earnest gesticulation, "yonder is the track for the road, and at this point it must terminate." "The ruling passion strong in death," was still animating and lightening his mind.

Few citizens have exhibited through a long career more ardor and devotedness for the promotion of the best interests of their country. The fact that his devotion to public concerns impaired the private fortune of Mr. Watson, attests the purity and disinterestedness of his motives. Some of the projects which he conceived were doubtless visionary and extravagant, while others. which found little favor in popular sentiment, in

their inception, proved by their results, the sagacity and prescience of his theories. Impatient at the listless and calculating spirit of doubt or scepticism that often crossed his path, he sometimes opposed it with an impetuous zeal rather than conciliatory moderation, and thus animated hostility when he might have diverted opposition. Mr. Watson's essays and other publications were very voluminous, and spread over a period of more than sixty years. He wrote with great fluency, and in a nervous and elevated style, wanting often, however, the polish and precision formed by the hand of finished education. He was not learned in science or literature; men and nature were the books he studied, and from travel and observation he had accumulated no ordinary fund of facts and intelligence. Mr. Watson died at Port Kent, December 5, 1842, in his 85th year. A plain monument is erected over his grave, inscribed with this simple and touching epitaph, written by himself:

HERE LIES THE REMAINS OF

ELKANAH WATSON,

The Founder and First President of the Berkshire Agricultural Society. May generations yet unborn learn by his example to love their country.

THE FARMER'S NOTE BOOK.

Benefits of Reading Agricultural Papers.

Since I last saw you in Albany, I have occupied some of my leisure moments in looking over the volumes of the Cultivator from its commencement. I have been induced to do so from curiosity to determine, from examination, whether the paper has generally had a *practical* character, or has been (as some carping persons say it has) a receptacle for wild, impracticable theories, or for puffs of speculator's humbugs in cattle, sheep, hogs, potatoes, corn, &c., &c. While I find much matter pertaining to husbandry which cannot be of practical value to me, or to other farmers in this immediate vicinity, I have been agreeably disappointed in finding so much knowledge communicated in its pages which I can immediately apply, and with immediate benefit. Much instruction contained in the early volumes of the Cultivator had passed from my memory—been forgotten with the volumes of the paper, when filed away, unbound and undisturbed. I mention this fact as a strong argument to other subscribers in favor of procuring the bound volumes, as I have done. Many farmers of sound judgment, and who are well informed on other subjects, refuse to subscribe for the Cultivator, assigning as a reason that it is the mere organ of a wealthy band of speculators in bulls and boars, and filled with laudatory notices of farming—such as rich, amateur farmers alone can follow. If such opponents of the Cultivator, and of kindred agricultural journals, would sit down, and carefully examine the matter contained in the published volumes. they would (many of them at least) become friends and patrons of the paper.

While leisurely turning over the pages of the Cultivator, and noticing their contents, I have frequently been reminded of remarks made to me, during the exciting political campaign of 1840, by a gentleman—an eminent lawyer, among whose papers I found the numbers of the Cultivator. Upon expressing my astonishment at finding *him* the reader of an agricultural paper, when he was not the proptietor even of a garden, he answered me—"I am not a farmer, and never expect to be. I was bred and have lived a lawyer, and shall continue letting myself out to be kicked in other men's quarrels; but the Cultivator is pleasant reading to me, and I turn from the details of my profession, and the sharp warfare of party, to the pages of that paper, as school boys turn from their dog-eared Virgils to the pages of glowing romance."

That a large portion of the earlier volumes of the Cultivator was devoted to the mode of farming best suited to the sandy plains about Albany, I know; but I also believe that a large space in its columns has effected much towards making "the desert rejoice, and blossom like the rose." I am fully of the opinion that the amount of knowledge relative to *the Diseases of Domestic Animals and their Cure*, which has been diffused through your paper, aside from all other matter contained in it, is worth more to any farmer than many times the cost of the paper.

And I here take occasion to remind you of the lamentable ignorance generally prevailing among farmers on the subject of the diseases of animals, and the proper method of treatment. With rare exceptions, farmers are ignorant on this subject, and the horse and cattle-doctors they are compelled to employ, are, most of them, vile quacks, knowing nothing of their business, and in their ignorance killing or ruining many a valuable animal. Even our physicians are generally as ignorant of comparative anatomy, as they are of the picture-writing of the Aztecs. In France men are regularly educated as veterinary surgeons, but I am not aware of any opportunity in this country of acquiring such knowledge. Our colleges, yielding to the demands of enlightened public opinion, are establishing professorships of scientific agriculture; but no college or school in the country, so far as I am informed, has given instruction on comparative anatomy, in connection with the cure of diseases affecting domestic animals. You have a flourishing medical college in your city which should take the lead in this matter. The city which furnishes the *first agricultural* paper in the country, should be the first to furnish correct information on this neglected subject. Furnish the graduates of that institution with as thorough knowledge of veterinary surgery, and its kindred branches, as they are taught on other matters pertaining to their profession, and their respectability or usefulness will not be impaired. They will then be able, without demeaning themselves, to benefit as well the property as the persons of their patrons; and in a pecuniary point of view will be gainers. S. A. Law. *Meredith, N. Y., Jan.* 21, 1848.

Fattening Hogs.

On the 11th day of April, 1846, I bought a sow and eleven pigs, the pigs being about three weeks old, for $12.25, and not having plenty of feed, (for I had recently changed my residence from Dutchess to Livingston,) I gave one pig away, and kept the rest, and fed them the milk of four cows, after it was well skimmed, with the slops from the kitchen, and the bran from 15 bushels of wheat, 8 bushels of oats, and 4 bushels of corn ground together. This was their feed till after harvest, when I turned them into the stubble, and fed them but very little till I shut them up to fat, which was about the first of October. I then put 9 of the shoats in a close pen, and fed them a few boiled

potatoes and some raw apples—I should think not to exceed $5 in value—and about 50 bushels of ears of corn, half of which was of an inferior quality—the whole of the corn being worth probably $12. On the 16th of November I butchered four of them—sold these in Rochester—two of them for $3.75 per hundred, and the other two for $3.50 per hundred—the weight of the four 685 lbs.; the amount received for them $24.86. The other five I killed on the first of December, and they weighed 977 lbs., which I laid down for family use; but the pork was worth at the time $4 per hundred. The sow and shoat I kept to winter, and they were worth $8. This ends the first year; and now for the second:

The result of the present year I shall not be able to give with as much accuracy, perhaps, as I did those of the first, as I had grain of my own raising to feed, and did not measure it as I did the first year when I had it to buy. But judging from the improvement of the two lots, I should think the expense of feed about the same. About the first of April my two sows had pigs; the old one had 13, ten of which I raised, and the young one had 7, which I sold with the mother when about three weeks old for $9. After harvest this year, my pigs had a better chance in the orchard than last year, but not so good a run in the stubble. Last year they were not permitted to run in the orchard at all, on account of my having corn on the same lot. About the first of November I shut up the ten shoats and fed them principally on corn until the 30th November, when four of them were butchered, which weighed 878 lbs.; and sold for $5 per hundred—and on the 9th of December the other five were slaughtered, and weighed 1012 lbs.; which were worth $5 per hundred also. On the 22d of December, killed the old one, after having her shut up only about five weeks—she weighing 357 lbs., which was sold for $5 per hundred. This ends the account of both years, except the summing up.

Dr.	Cost of sow and pigs, April 11th, 1846,.....		$12.25
	Expense of summer feed and fattening, 8 bush oats, at 2s. 6d, 4 do. corn, 4s, 25 do. corn, 3s. 6d., and bran from 15 bush. wheat, $2,.....		18.06
			30.31
Cr.	By sale of 685 lbs. of pork, ...	$21.86	
	Value of 977 lbs., at 4c., per lb.,.....	39.08	
	Value of old sow and shoat to winter,.....	8.00	71.94
	Leaves to pay for milk, whey, pasture, care, &c.,		$41.63

SECOND YEAR.

Dr.		Cr.	
Value of sow and pigs same as when purchased,.....	$12.25	By 878 lbs. of pork, sold for 5c. per lb.,.....	$43 90
Expense of summer feed,	7.50	By 1012 lbs., worth 5c.,.	50.60
Of corn in fattening, 100 bush. at 50c. per bush.,	50.00	By 357 lbs., sold for 5c.,	17 85
	69.75		112.35
			69.75
			$42.60

Avon, Dec. 31st, 1847. S. S. MOREHOUSE.

Breeding Horses.

I have read Mr. Burnett's remarks in the Cultivator on the subject of breeding horses. He advocates the use of thorough-bred stallions with our common mares. As far as my observation has gone, the great error of breeders has been that they have consented to use any horse they meet with, provided he has a long pedigree.

Mr. B. seems to think there can be no such thing as a "horse of all work." I think the farmer wants a horse of that kind; he does not want one merely for the carriage or the cart, but for various uses.

As to the saddle-horse, the less the farmer has to do with him the better. Of what use is such a horse but to prance up and down a few minutes in a day for *amusement?*

And the "three-minute" horse—the farmer does not want him, neither does any one but a fop or jockey.

Again, I think a medium-sized horse, weighing from ten to twelve hundred, is best even for *draft*. They are easier to keep, and though they may not be able to draw as much at a load, they are quicker, and generally more tractable. I am in favor of rearing *good* horses, as they cost no more than long legged, slab-sided, worthless animals.

I do not understand Mr. Burnet's objection to having a mare well ribbed up. He says:—"I would not have her too closely ribbed up, for this is objectionable in either mare or horse." I do not understand *wherein* he thinks this an objection, especially as he says it is desirable that the foal should be *close* in this respect. JUNIUS. *Farmington, Ct.*, 1848.

Subsoil Plowing.

ELIAS PHINNEY, Esq., Lexington, Mass., is of opinion that a great benefit would be derived from subsoiling on "hard New England soils," as a protection against drouth. The stirring and deepening of the subsoil gives plants an opportunity to extend their roots, so that more moisture is brought within their reach. Mr. P. observes, that on fields which have been long cultivated, a crust is formed at the depth to which the land is usually plowed, which becomes almost as impenetrable as the highway which has been travelled over for a like number of years. He has practiced subsoiling considerably for several years, and states that the increase of crops in consequence of this operation has never been less than 25 per cent. He derived less benefit from subsoiling last year than usual, owing to the more regular supply of rain through the season; yet on a dry loamy soil, with a hard, gravelly subsoil, he obtained a greater yield of potatoes by one-fourth, from subsoiled rows, though planted side by side with others not subsoiled. This was not the only difference—for the potatoes from the subsoiled portion were so much superior in appearance, that they actually sold in market for 25 per cent. more than the others—making an advantage from subsoiling, in both quality and quantity, of 50 per cent.

DEAN ROBINSON, of West Newbury, Mass., also states that he has used the subsoil plow on land which has a very hard subsoil, "composed of clay, gravel, and small stones." His custom has been to follow the sward plow with the subsoil plow, both of which stir the ground to the depth of 20 inches. He considers the cost of this mode double that of common plowing; but he thinks the extra expense is fully compensated in the saving of labor in after cultivation, as the land is much lighter and is easier worked after subsoiling. He also uses the subsoil plow on his garden, and on all land designed for the growth of tap-rooted vegetables. We gather these facts from the Transactions of the Essex (Mass.) Ag. Society.

Good Cows.

From the statement of competitors at the show of the Worcester County (Mass.) Ag. Society, we gather the following:—M. G. MAYNARD, of Westborough, offered a cow eight years old, one-fourth Durham, which calved the 12th of May. In ten days, from the 10th to the 20th of June, she gave an average of eighteen five-eighths quarts per day. In the same length of time, from the 10th to the 20th September, she gave an average of 13 5-8ths quarts per day. Her feed was pasture, in common with other cows.

CHARLES WILCOX, of New Braintree, offered two cows. One of them, eight years old, calved 11th May. In ten days, from 1st to 10th June, gave an average of 20 6-10th quarts. In ten days, from 1st to 10th September, she gave an average of 14½ quarts per day. The other cow offered was of the same age, and calved

at the same time as the above. In ten days, from the 1st to the 10th of June, she gave an average of 20 6-10th quarts per day; in the same length of time, from the 1st to the 10th of September, an average of 14 4-10th quarts per day.

Wm. S. Lincoln, of Worcester, offered one cow. She was seven years old, and calved 27th May. In ten days, from the 1st to the 10th of June, she gave an average of 16 7-10th quarts per day, which yielded in the ten days, 16 lbs. and a fraction of butter. From the 6th to the 15th of September, she afforded an average of 10 4-10th quarts per day, which yielded in the ten days, 14 lbs. 10 oz. of butter.

Nahum Warren, of Shrewsbury, offered a cow, four years old, from which 13 lbs. of butter were made in 10 days in June; and 10 lbs. in the same length of time in September.

Jacob W. Watson, of Princeton, offered a cow, from which 18½ lbs. of butter were made in ten days, from 10th to 20th June; and in ten days, from the 10th to the 20th September, 13¾ lbs.

Charles E. Miles, of Shrewsbury, offered two cows six and seven years old. They had been kept for the purpose of fattening calves for veal. One cow calved on the 15th of February. When taken to the show, in September, she had a calf by her side, and she had then fattened four calves, whose veal weighed 380 lbs., and sold for $30.40. The other cow calved on the 25th of March. She fattened her own calf and four others, whose weight of veal was 450 lbs., and sold for $36. Mr. Miles had three other cows which were used for fattening calves. From the five, 2,050 lbs. of veal, which sold at an average of 8 cents per pound, and brought $164.

The Committee make some observations in regard to the quality of milch cows which are worthy of attention:

"It is supposed that a cow of *medium* quality will give, for two months after calving, 12 quarts of milk per day; four months following, 7 quarts; two months, 4 quarts; one month, 2 quarts—amounting to 1,860 quarts, or an average for nine months of about seven quarts per day. It will take ten quarts of milk to make one pound of butter; thus producing about 186 lbs., which at 16 cents, amounts to about $30. Suppose every farmer to resolve that he would keep no cow that did not hold out as a good milker for ten months in the year, and that did not give, for two months, 16 quarts per day; four months, 12 quarts; three months, 7; one month, 2—amounting to 3,090 quarts, or an average of ten quarts per day for ten months? Is it not practicable to have, throughout the country, cows as good as the last described?"

Potato Disease or Rot.

We have received from Rev. Chas. A. Goodrich, of Hartford, Ct., an article first published in the *Hartford Courant*, in reference to the potato disease. An enumeration of some of the causes assigned for this malady is given from an English paper, the principal of which are:—Attacks of parasitical fungi, insects, ("the idlest of all speculations," says the English authority,) frost, lightning, exhausted vitality, bad cultivation, manures, miasmata, such as produce cholera in men, and other epidemics. Mr. G. thinks none of these causes appear tenable, "unless it be the last." He observes—"it seems apparent, at least to the writer, that the disease did not originate in the soil, nor is it attributable to any defect in the potato itself. The remote cause is some peculiar change in the *atmosphere*, which we may never understand: the proximate cause, consequent upon that change, is the *derangement of the functions of the stalk and leaves*."

Mr. G. holds that the leaves and stalks are first affected, through this atmospheric influence, and that the vitiated juices are transmitted to the tubers, thus laying the foundation for their disease and decay. Its effects, he believes, are something in proportion to the stage of growth the tubers are in when the tops are attacked. Hence he observes—"If the tuber was but half grown, the stalk would be proportionately green, and the injurious process would be longer continued. If the potato was nearly ripe, still the process might proceed, and acrid food be transmitted sufficient to cause its decay in the course of weeks or months. And does not this," he continues, "account for the fact that potatoes which appear fair and sound for some time after they are housed, ultimately betray symptoms of disease, and in the course of the winter become worthless? They were inoculated with the disease, and in process of time the infection breaks out. Upon this theory different varieties would suffer unequally, being more or less hardy, and the same variety on different soils might also be differently affected. * * * *

"Should the inquiry be made, why some fields, either in whole or in part, escape the ravages of this disease, while contiguous crops are entirely ruined, the reply is, that it will be in season to answer the question, when the interrogator shall explain why some peach trees escape the yellows, while others wither and die under that scourge—or some pear trees escape the blight, while neighboring ones are ruined; and especially why the frost plays such 'fantastic tricks' in a field of corn, nipping here and there some whole rows, and then again sparing nearly every alternate hill."

As to remedies, Mr. G. thinks it is "by no means certain that a remedy may not yet be disovered," and he advises that experiments be multiplied every succeeding year. His "chief hope," however, is that "in the course of a few years the cause of the injury in the atmosphere will gradually disappear."

Suggestions to Farmers.

I sometimes fancy to myself, when I hear persons who live on the rich and fertile prairies of the west, praise the luxuriance of their soil, and boast of the bountiful crops they yield with little labor, that they ought to be regarded somewhat as we now look upon those early settlers in the Mohawk valley, who, it is said, were in the habit of carting the manure made upon their lands to the river, and throwing it in, for fear, that should it remain, their lands would become too rich.

In their wisdom, supposing their lands could never be exhausted, they continued to plow the same fields, until at last "a change came o'er the spirit of their dreams," and they found to their cost, that the lands they supposed inexhaustibly fertile, had become sterile and unproductive; and such I think will be the result of the present system of cultivation pursued by our western friends. Chemistry shows us that by taking a succession of crops off from the same ground one year after another, without any return to it, the inevitable effect must be ultimately, that it will lose its fertility. The lands of our county, especially the richer portions of it, have quite too commonly met with this usage. A few years since it was not unfrequently remarked by our farmers, that they formerly received good crops from particular portions of their lands, but that then they could not get crops from the same ground that would pay the trouble of cultivation. Something, they said, must be wanting in the soil, but what they did not know. Chemistry has solved this problem, and it is now beginning to be understood by them, that their soil must be fed with proper food as

well as their cattle if they would have it productive; and that true economy consists in highly cultivating smaller quantities of land, by deep plowing and manuring, rather than running over a large quantity of land with slight tillage.

"A little farm well tilled. A large barn well filled.
A little wife well willed, Give me, give me."

This lesson is one our farmers have been slow to learn. While it has been their practice in cultivating their gardens to resort to thorough tillage, and, as a consequence, they produce more from them than from any other equal portion of their land; in the raising of field crops the hint thus given them has been entirely neglected. It is supposed that the fruit and kitchen gardens in the vicinity of the city of London, occupy 20,000 acres of land, and that the produce of this land is sold for over $7,000,000, while in the most favored portions of farming lands in our own country, $500,000 would generally be considered a good product for the same quantity of land. Knowledge and experience will in time correct the errors into which our farmers have fallen in regard to cultivating their lands, and even now I think I see a bright prospect for the future, in the formation of agricultural associations, in the circulation of agricultural papers, and other periodicals; in the improvement of the farm stock; in the improved tillage and drainage of lands; and above all, in the increased attention given to the saving and use of manures. When these come to be well understood and practiced, we may confidently expect to see farms of 40 and 60 acres producing more, and returning a better and more certain profit to the farmer, than farms now do which contain many additional acres. ONEIDA.

Varieties of Wheat.

We have been experimenting some in the wheat line, having procured from Philadelphia, in the fall of 1846, some of the celebrated "Stewart," or "Etrurian" wheat, and also some of the "White Blue-stem," from Mr. Hunter, of Lycoming County, Pa., and some of the "Yellow Blue-stem" from our own neighborhood.

The Stewart wheat is a fine grain, and has a long head; but we could not tell so well how it would succeed, for the frost killed half or two-thirds of it. The other kinds stood the winter well; but the White Blue-stem is far the finest grain—has the longest head, and yielded a fourth more than the Yellow Blue-stem, although sowed side by side, on the same kind of ground. In fact, the White Blue-stem is with us every way equal to the Stewart wheat, without the danger of being winter-killed. We have sowed no other kind this year, and have distributed the seed among our farmers.

SUBSOIL PLOWING.—We have been trying the subsoil plow on our hilly land, and find it will fully pay in preventing washes by rain, besides being very useful in other respects. It causes the soil to act somewhat on the sponge principle; that is, if the ground is made mellow twelve or fifteen inches deep, it absorbs the water that will fall in an ordinary rain; whereas if only three or four inches of the surface is loosened, as is generally the case, it is soon filled with water, and a sudden dash of rain washes the soil away, leaving the fields cut up in gullies. JAMES L. COX. *Zanesville, O., Jan.* '48.

Good Hogs.

Much is said about good and poor breeds of hogs. I am willing to admit that there is all the difference ascribed, but the poorest breed that a man ever had is as good as any breed to many. I killed seven hogs this fall that averaged 455 lbs each. They were a year old last spring, except one, which was older, and weighed 580 lbs. These are not the heaviest hogs I *know*, but I consider the breed is not extra, and there was no extra pains taken in keeping them. I sold them at $5½ per hundred, when lighter ones brought $4.75 and $5. I have some pigs now feeding which were dropped last March, that if dressed, would weigh over 300 lbs. each; they have been only middling well kept—not extra. The grain that I fed my hogs, aside from the dairy refuse, (which was whey,) was worth here just about $80. E. P. INGALLS. *Cape Vincent, N. Y., Jan.*, 1848.

Hints for March.

Cows and ewes, which are near the period of parturition, require attention. For three or four weeks before they bring forth, their food should be of such a nature as will impart strength to them and their offspring, and at the same time promote the secretion of milk. Brewer's grains, where they can be obtained, are among the cheapest and best articles that can be used. They may be fed to cows at the rate of a peck for each cow, per day, before calving, and a half-bushel per day afterwards. Sheep may be fed from one quart to three quarts per day. Where the grains cannot be had, a little corn or oats, for sheep—say a pint of oats, or from a gill to a half pint of corn to each, per day, and for cows, corn meal, or meal from corn and oats; or corn and cob ground together, at the rate of from two to four quarts each per day, will be beneficial. A few carrots—say a peck to a cow, and a quart to a sheep, per day—will greatly favor the secretion of milk, and may be given with advantage in addition to the meal or corn. The best of hay should be provided. Clover, cut before it was too ripe, and so nicely made that none of its heads or leaves have been lost, and is free from mustiness and dust, is not inferior to any other hay, excepting for working horses and oxen. The animals should have dry and comfortable shelter, and should not be exposed to storms.

March is the best month in the year for securing wood and timber. Wood should therefore be cut, split, and piled, that it may have the benefit of the drying winds which usually prevail during this month.

Hot-beds, if not already made, should be formed at once. Directions for making will be found in our last volume, page 85—also in vol ix, (old series,) p. 55.

Manures may be composted in this month, and will be sufficiently decomposed for use by the time they are wanted for spring crops.

Oats may sometimes be sown in the latter part of this month or beginning of April. It is always advisable to sow them as early as practicable, or as soon as the ground is in a suitable state. The best varieties of the Irish and Scotch oats are very heavy, and from some trials made here with them, appear to exceed in yield and value the common oats of this country. The Hope-Town oat is one of the best kinds. It is early, hardy, and productive. An advertisement of seed of this variety will be found in this number.

Agricultural Discussions.

Weekly meetings for the discussion of agricultural subjects, have been held at the Capitol in this city, since the 12th of January last. They have generally been better attended, and have been carried on with more spirit than in former years—circumstances indicative of a growing interest in agricultural investigation. This is evidently the case in most parts of the country. In Boston, where these meetings were commenced nine years ago, they have been continually increasing in popular favor.

Considerable interest is evinced in the reports of these discussions, and we have had various inquiries in regard to their publication; but as our work is only issued monthly, it would be impracticable to give them as early as would be desired. Besides, the great press

of other matters at this season of the year, precludes their insertion in detail. They are published in the Albany *Evening Journal*, and will appear, (perhaps somewhat abridged,) in the Transactions of the State Agricultural Society.

At Boston, the reports of the discussions are published in three or four of the daily and weekly papers. This gives them an extensive circulation, and it would be an advantage if this course was adopted here.

The first subject taken up at the Albany meetings was that of Manures—their Properties, Action, &c. This occupied one evening, and a second evening was devoted to a consideration of the question whether manure should be applied in a fresh or fermented state—or under what circumstances it should be applied in either form. After considerable discussion the following resolution was unanimously adopted:

"*Resolved*, That in the judgment of this meeting, it is generally most expedient to apply manure in an unfermented state on clayey or stiff soils, and particularly for hoed crops, and that it should be well incorporated with the soil: on lighter soils, whether of a sandy or gravelly character, it is far more profitable to make the application in a fermented compost, for nearly if not quite every kind of crop."

At the third meeting, Dr. A. H. Stevens, of New-York, delivered a very interesting lecture on "The Food of Plants;" and after its conclusion, the subject of Sheep and Wool—their Management and Preparation for market, was taken up for discussion. Mr. Blanchard, of Kinderhook, made some excellent remarks, generally in reference to the manner in which wool should be put up for sale, and the mode of disposing of it to the best advantage; in doing which he considered the expediency of establishing "Wool Depots," and demonstrated, conclusively, the advantage and superiority of the system for the advancement of the interest of the wool-grower, as well as for the convenience and accommodation of the manufacturer.

The same subject was continued at the succeeding meeting, and considerable interesting matter in relation to the breeding and management of sheep was brought out. At the close of the meeting, the following resolution was passed:

"*Resolved*, That we deem the establishment of wool depots for the sale of wool, well calculated to secure to the wool grower a fair and reasonable compensation for his wool, and that the system is worthy of a full trial."

Agricultural Societies.

Washington County, Vt.—Officers for the present year—Roderick Richardson, Presidents; Nathaniel Eaton, Henry Nutt, Vice-Pressdent; J. W. Howes, Secretary; Lyman Briggs, Treasurer.

Wayne County, N. Y.—Officers, A. G. Percy, President; N. B. Caswell, Rec. Secretary; H. Knowls, Treasurer. Next Fair to be held at Lyons, on the 4th Wednesday and Thursday of September. Delegates have been appointed by this society, to attend the fairs of the adjoining counties, for the purpose of collecting useful information. Other societies would do well to adopt the same plan.

Oneida County, N. Y.—Officers, J. S. Hitchcock, President; H. Rhodes, P. Mattoon, M. L. Butler, R. Eells, W. C. Burritt, P. Norton, H. N. Cary, H. Dunbar, W. Ferguson, W. Bristol, Vice President; C. C. Cook, Cor. Sec'y.; E. Comstock, Rec. Secy; B. N. Huntington, Treasurer. Premiums were awarded at the annual meeting of this society for the following crops:—*Winter Wheat*, 39 bushels 8 1-2 lbs. on one acre. *Indian Corn*, 86 1-4 bushels, also 71 1-2; 67 1-8 bushels, another of 67 1-8 bushels, 66 bushels, each the product of one acre. *Barley*, 52 bushels, 35 pounds, also 49 bushels 24 pounds; 38 1-2 bushels—each the product of one acre. *Oats*, 85 3-4 bushels, 84 1-2 bushels, 76 bushels, each from one acre. *Peas*, 37 3-4 on seven eighths of an acre. *Potatoes*, 162 bushels on half an acre. *Carrots*, 201 bushels on a fourth of an acre. *Mangel wurtzel*, 325 bushels on a fourth of an acre.

The Jefferson County (N. Y.) Ag. Society, at its last annual meeting awarded premiums for the following crops. *Indian corn*, 86 bushels, 80 bushels, each from an acre. *Oats*, 74 bushels per acre. *Potatoes*, 347 bushels per acre. *Carrots*, 764 bushels per acre.

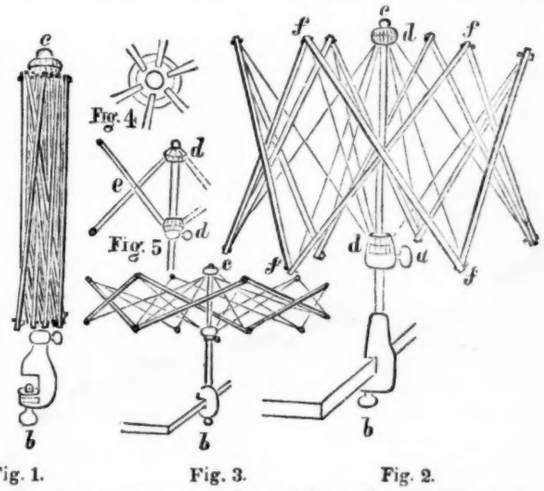
Chittenden Co. Vt.—Officers for the current year. Henry S. Morse, President; Birdsey Newell, Lemuel B. Platt, Vice Presidents; Caspar T. Hopkins, Secretary; John S. Pierce, Treasurer. The Society at its last meeting awarded premiums for the following crops. *Winter wheat*, 36 1-2 bushels and 30 bushels each for one acre. *Spring wheat*, 26 bushels per acre. *Indian corn*, 210, 209, 197, 191 bushels of ears each on one acre; calculated to be equivalent, respectively, to 105, 104½, 98½, 95½ bushels, of shelled corn per acre. *Oats*, 79 bushels, and 70 do. per acre. *Potatoes*, 195, 190, 189 1-2 bushels—each from half an acre. *Carrots*, 332, 280, 232 bushels—each from one fourth of an acre. *Peas*, 47 1-2 bushels from one acre. *Beans*, 30 bushels from half an acre.

Vernon Ag. Association—Nathaniel S. Wright, President, Salmon Case, Willette H. Shearman, Elijah Wilson, Samuel H. Church, Vice Presidents; Levi T. Marshall, Vernon Centre, Cor. Sec'y; Luther R. Foot, Rec. Sec'y; Josiah Case, Treasurer.

Domestic Economy, Recipes, &c.

A convenient Swift.

Every man or boy who has kindly held the skein of thread or yarn on his extended wrists, to assist the housewife to wind it into a ball, until the *arm-ache* has compelled him to desist, will know the convenience of a simple machine to perform this task. The one figured below is so incomparably superior to anything of the kind we have ever met with, and besides appears to be so little known, that we are induced to give a description. It may not be new to some, as it has been in use for thirty years or more, yet we have scarcely ever met with it for sale in any shop in the country.



It may appear complex at first glance, but it is in reality admirable for its simplicity, and its strict mathematical ingenuity, which must strike every person who examines one already constructed. It may be folded in *one second* when not in use, and safely lodged in a drawer, or even put into the pocket if necessary. It is about eighteen inches in length when folded, and two

inches in diameter.* Fig. 1, exhibits its appearance when not in use; fig. 2, when partly opened, and screwed to the edge of a table by the button *b*; and fig. 3 the same on a smaller scale, extended to its extreme limit. It is adapted to a skein of any length from six inches to three feet,† by raising or depressing the sliding ring, and fixing it by the button and screw *a*. The upright standard, *b c*, which is screwed to the table as shown in the figure, when in use,—is furnished with 2 circular rings *d d* for receiving the ends of the rods, and on which they form a turning joint, precisely like the 2 rings of an umbrella which receive the inner ends of the rods and braces. The upper one is immovable, the lower one slides freely. A cross section of one of these rings is shown in fig. 4, the dotted circular line being the wire which passes through the ends of all the rods, forming the joints. The rest consists of 18 slender pieces of wood or lath about 14 inches long, half an inch wide, and the tenth of an inch thick, with a hole at each end to receive a cord for fastening the ends together. Six of these are fastened by the moveable joint to the upper ring, and six more to the lower; and the corresponding upper and lower ones cross each other as shown in fig. 5, at the middle, *e*, where a rivet passing through both, forms a turning joint. The remaining six are fastened to the outer ends of these first twelve, by cords through the holes at the extremities, these last six also crossing each other by couples, and riveted as before mentioned, at the crossing point; as shown for instance by the two rods *ff*, *ff*, in fig. 2. To prevent confusion, the twelve inner rods are represented in fig. 2, by merely dotted lines.

We should think that the whole could be easily made for a dollar, being wholly of wood, except the wire and cords. We have used one many years, and it never gets out of order.

TIN VATS FOR CHEESE.—A correspondent of the Prairie Farmer describes the tin vats which are used by the Herkimer cheese makers in this State with so much success, as follows:—One for a dairy of 30 cows is 2½ ft. wide, 6 ft. long, and 19 inches deep; set inside a wooden vat, so as to leave a space of 2 inches between them, that the tin vat may be surrounded with water. The night milk is strained into the tin vat, which surrounded with cold water, is kept till morning. After the morning milk is added, the water is heated by a steam pipe to about 84° by the thermometer. Rennet is applied, and the resulting curd scalded by the same way, at 104°. The whey is then drawn by a plug. One farmer, who has 70 cows, finds it about as easy to make cheese from them (weighing one hundred and fifty to two hundred and twenty pounds,) as from a dozen cows by the old process.

FEMALE INDUSTRY.—The value of straw and palm-leaf hats, &c., made by females in Massachusetts in 1847, was $1,640,596.

Answers to Inquiries.

EMIR OR SKINLESS BARLEY.—W. A., Canajoharie, N. Y. We have but little information in regard to this kind of grain, in addition to what we have already published. That it is more "valuable" *per bushel*, as breadstuff, or for stock than common barley, there is no doubt, as it is considerably heavier. Of its value for *malting* we know nothing. It is represented as hardy, and as yielding more *weight* per acre than the common kind. We suppose its chief recommendation, however, is its freedom from husk, which renders it more convenient as an article of food for families.

SOWING CARROTS.—L. P., Proctorsville, Vt. On light soils, we should prefer leaving the surface level, and would sow the seed with a machine, in rows, fourteen to sixteen inches apart. If the ground is inclining to be wet and heavy, we should sow on ridges, which might be made by a small double mould board plow.

HAND OR HORSE-MILL.—W. J. B., Hillsboro, N. C. We know of no hand-mill that it would be an object to use for the purpose you mention. Fitzgerald's mill, which can be moved with one horse, but to much better advantage with two horses, will do a good business at grinding any kind of grain, and will make good flour or meal. The cost of the mill is $70.

CORN-AND-COB-CUTTER.—C. L. T., Claridon, Ohio. Pitts' corn-and-cob-cutter will cut up corn and cob about the fineness of what is called "coarse feed," and can be worked with any two-horse power. They may be had here, or of the manufacturer, JOHN A. PITTS, Rochester, at $40 each. Sinclair's corn-and-cob-cutter is manufactured at Baltimore. Md. It is said to do good work with a two-horse power. It crushes the corn and cob between cast-iron plates. Its cost is $32, with a set of extra plates. They may be had here or at Baltimore.

SAW TO BE WORKED BY HORSE-POWER.—J. A., Morrisdale, Pa. We do not know of any two-horse power that would answer to saw "common boards" *from logs;* but a good endless-chain power, calculated for only one horse, would do well for slitting up boards or plank, in almost any form, or for cutting wood into any desired lengths.

CHEAP FENCES.—T., Bucks county, Pa. We would refer you to the last volume of the Cultivator, page 51, for descriptions of several kinds of fences, some of which would probably be adapted to your purpose.

CULTURE OF BEANS.—The kind generally preferred at the north is called the "pea bean." The usual distance of the hills is three feet by one foot, (or one foot and a half.) Twelve quarts of seed are used to an acre. They are planted from the middle of May to the first of June. The usual yield is from fifteen to thirty-five bushels per acre.

DOCKING LAMBS.—S. W., North Easton, N. York. When the tails of sheep are allowed to remain their full length, the manure frequently attaches to them, and by this means adheres more or less to the wool with which the tail comes in contact, by which considerable injury is done the fleece. We suppose the object in cutting off the tail, is to avoid the consequences mentioned, and this object, we think is, in part at least, effected.

APPLE FOR A NAME.—J. S. S., Bridgeport, Ct. Your apple has been examined by several judges of fruit, but no one can tell what it is.

RAT-PROOF GRANARIES.—In the Cultivator of this month, you ask for suggestions in regard to a "Rat Proof Granary or corn crib."

Put your crib on cedar posts, four feet from the ground, tinning the posts one foot down, immediately under the crib sills and cover the top of the posts with a tin pan, like the ordinary milk-pan, inverted, or bottom next the sill; and if you will always remember to take away the steps by which you enter the door of the crib, you will not have rats or mice. A SUBSCRIBER.

Paterson, N. J., Feb. 3, 1848.

DEATH OF HORSES BY POISON.—Seven horses belonging to Thomas Craig, of Philadelphia, were lost a few weeks ago, in consequence of the infusion of poison, by rats, into their feed; an adjoining stable, which was much infested by rats, having been plentifully supplied with poison, which they carried abroad.

* That the wooden screw *b* may firmly hold to its socket, a wooden pin through which it passes, is driven into the base, as shown by the dotted lines in fig. 1.

† Very small ones, that may be put into the vest pocket, are sometimes made for winding skeins of silk, and other small articles of the kind; the above described is intended for large skeins of yarn, as well as smaller.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

POSTAGE OF "THE CULTIVATOR."—We learn with surprise that several postmasters in different sections of the country, insist on charging "The Cultivator" with *pamphlet* postage. No one who will read the post office law, can doubt for a moment that the Cultivator is clearly a newspaper in the meaning of that law. Beside this, every Postmaster General, since the establishment of the paper, has *decided that it was subject to newspaper postage only*. We republish the decision of the present head of the Post-Office Department upon the subject:

Appointment Office, P. O. Dept, Feb. 14, 1846.

SIR—In reply to your letter of the 10th inst., I have to say that "The Cultivator," published at Albany, N. Y., in the form it which it is transmitted for the decision of the Department, is regarded as being subject to newspaper postage only. I am, sir, respectfully yours,

W. J. BROWN,

LUTHER TUCKER, Esq. 2d Ass't. P. M. General.

COMMUNICATIONS have been received the past month from R. H., S. A. Law, S. W. Jewett, Oneida, Bucks Co. Farmer, F. J. Scott, A Subscriber, R. K. Tuttle, F. Holbrook, A., Samuel Wilbur, J. B. Burnett, An Old Milker, J. Ten Broeck, W., C. E. G., F. J. Scott, H. R. Congdon, P. D. S., J. D., Andrew Bush.

BOOKS, PAMHLETS, &c. have been received during the past month, as follows:—TRANSACTIONS of the Mass. Hort. Society, No. I., from the President M. P. WILDER Esq.—TRANSACTIONS of the Worcester Co. (Mass.) Ag. Society for 1847, from Col. J. W. LINCOLN.—PROCEEDINGS of Greene Co., (N. Y.) Ag. Society, from H.G. DAY, Esq.—Rev. DR. ALLEN's Historical Discourse, on the 40th anniversary of the gathering of the 2d church, Dorchester, from M. P. WILDER, Esq.—EWBANK's HYDRAULICS and Mechanics, Parts II and III, from the publishers, GREELEY & MCELRATH, New-York.—TRANSACTIONS of the Ohio Fruit Grower's Convention, held at Columbus in September last, from M. B. BATEHAM, Ed. Ohio Cultivator.—LECTURES on Ag. Chemistry, before the Senior class of the University of Georgia, by Prof. J. LE CONTE, M. D.—REPORT of the Buffalo Hort. Society for 1847.—ANNUAL REPORT of the Mass. Insane Asylum, Worcester, for 1847, from DR. GEO. CHANDLER, principal of the institution.—TRANSACTIONS of Trumbull Co. (O.) Ag. Society, for 1847, from F. E. STOWE, Esq.

ELKANAH WATSON.—We have great pleasure in being able to present our readers this month, with a brief, but very interesting memoir of ELKANAH WATSON, Esq., the founder of the Berkshire Ag. Society, and by whose efforts the first Cattle-Show was held in this country. For a large portion of the facts embraced in this memoir, we are indebted to W. C. WATSON, Esq., of Port Kent, who we are pleased to learn, is preparing for the press a memoir of his father, to embrace extracts from his Diary and Correspondence, a work which, from Mr. W.'s association and correspondence with the most prominent men of his age, both at home and abroad, cannot fail of being read with great interest. The Portrait, which accompanies the memoir, is engraved from one given in Mr. Watson's "History of Ag. Societies," published in 1820.

WOOD'S PATENT CAST-IRON PLOW.—A bill has passed the Senate of the United States, to renew the patent of Jethro Wood, for his improvements in the cast-iron plow, for the term of seven years. This patent was originally taken out in 1819, and has been once renewed, extending to a period of twenty-eight years. Without meddling with the question of the merits of Mr. Wood's claim to the improvements which were patented to him, we cannot but think that the patent should now be permitted to expire. Jethro Wood's plow was, it is well known, far inferior to the best plows of the present day. But it is claimed that few or none of these plows can be made without an infringement of Wood's patent. If this be the case, it would seem an act of great injustice to the farmer, to compel him to use a plow of the old patent of 1819, or to pay a tax of 50 cents for the use of a plow which later inventors have brought to a much higher state of perfection. Few can doubt but that Mr. Wood, or others for him, received in the twenty-eight years which his patent has already covered, an equivalent from the public equal to the benefit conferred. Had Mr. Wood followed up his improvement, and made a plow equal to the best now in use, there would have been more justice in the claim for the renewal; but as he left this work to be performed by others, it appears to us that neither his heirs nor those to whom he assigned large portions of his patent, have rightly any further claim upon the public for protection; especially as this protection cannot be given without positive injustice both to the farmer and to later improvers of the plow.

HORTICULTURAL EXHIBITION.—The meeting for the exhibition of winter fruits of the Albany and Rensselaer Horticultural Society, was held at the Agricultural Rooms, Albany, on the 11th of February. There was a handsome exhibition of apples and a few pears. Among the apples were the Swaar, Vandervere, Spitzenburgh, Seek-no-farther, Blue Pearmain, Roxbury Russet, Rhode Island Greening, Newtown Pippin, Northern Spy, Winter King, Scolloped or German Gilli-flower, Bristol apple—the two latter excellent apples not common here. The pears were a seedling from HENRY SNIDER, of Kinderhook; and Inconnue of Van Mons, Easter Beurre, Prince's St. Germain from DR. HERMAN WENDELL, of Albany. DR. WENDELL received the first premium on pears, and W. NEWCOMB, of Pittstown, Rensselaer county, the first premium on apples. DR. BEEKMAN, H. SNYDER, T. M. BURT, PETER KINGMAN, of Kinderhook, sent fine samples of apples, as did also MR. BRIGGS, of Schaghticoke, MR. RHODES, of Albany, and Mr. FROST of Chemung county. MR. WILSON, of Albany, made a beautiful display of camelias and other flowers appropriate to the season. COL. RATHBONE, the President of the society, presented (through his gardner) some fine bunches of asparagus. We did not learn the particular mode in which it was produced.

DEATH OF HENRY WATSON, ESQ.—We learn with much regret that this gentleman died suddenly, at his residence in East Windsor, Ct., on the 27th January last. He was widely known as an active and enterprising agriculturist and stock-breeder, having been extensively engaged in rural pursuits for a period of forty years.

ROCK SALT.—We invite attention to an advertisement of this article in the present number. It is the English rock salt in its crude state. It is in lumps, of the size of a man's fist to the size of a man's head. It is very hard, and will not readily dissolve; hence it is the very best kind of salt for feeding stock—as it may be placed on stones, or in troughs, in the pastures, and

will not waste away; but the animals can obtain whatever they desire by licking it as their appetites prompt them. We recommend the article as the cheapest and best of the kind for the purpose mentioned.

MR. AYRAULT'S FAT OXEN.—These oxen, which were noticed in our January number, we understand were slaughtered about the 1st of February. Mr. MAHONEY, of this city, has furnished us with the following memorandum of their weight, which he received from Mr. B. LAWRENCE, of the Centre Market, New-York, who slaughtered the cattle, and sold their beef: Live weight of the two, 5,522 lbs.; dressed weight—quarters 3,650, tallow, 512, hide 214 = 4,376 lbs. They sold, alive, for $550.

BALDWIN'S CHURN.—This article was invented by E. BALDWIN, of Ballston, Saratoga Co., N. Y. The advatages claimed for it are—its simplicity and cheapness, and the small power with which it may be operated. It does not differ materially from the "cradle-churn," which has been used in some sections for many years.

FARMER'S CLUBS.—We are pleased to learn that these associations are increasing in the country, and that they are highly approved for their beneficial results. Mr. GUY BIGELOW, of Colchester, Conn., writes us that an "Agricultural Association," was formed in that neighborhood in 1842. It was made a rule that not less than six, nor more than twelve men, with their wives, should "meet monthly at the residence of the members, in alphabetical order, and spend the afternoon and evening." Mr. B. says—"these meetings are considered interesting and beneficial. Each member pays into the treasury $1 annually, and has a copy of the Cultivator."

MANUFACTURE OF CHEESE.—Mr. L. B. MALTBY, of Trumbull County, Ohio, wishes information in regard to a steam apparatus used in the manufacture of cheese, which he has been told has been introduced by Mr. GORDON FARMER, of Mohawk, Herkimer Co., N. Y. If some person will give us a description of this apparatus, together with its expense, &c., they will confer a favor. Mr. M. also wishes information through the Cultivator, in regard to the mode of manufacturing the "Hamburgh cheese, of Erie county, N. Y." We hope some of our correspondents in that section will forward us the information called for.

CULTIVATOR FOR AGRICULTURAL SOCIETIES.—At the last annual meeting of the Caledonian Co. (Vt.) Ag. Society, it was resolved, "That a copy of the Albany Cultivator, for one year, be furnished to those members who pay one dollar into the treasury the present year."

ASHES ON POTATOES.—Mr. W. R. WEBB, of Clark County, Ohio, states that in planting his potatoes last year, he used on a portion of the lot "about a shovelfull of leached ashes on each hill," and that on this part the potatoes were not hurt by the rot. On another part of the lot, where no ashes were put, two-thirds of the potatoes, as stated, rotted. Mr. W. inquires whether the ashes saved the crop. We can only say that the effect of ashes on the growth of potatoes is generally favorable; but in regard to the prevention from rot, results are so contradictory, that we would not venture a conclusion.

SMITH'S CORN-SHELLER.—ELIJAH WILLARD, Esq. of Union county, Illinois, writes—"I purchased in St. Louis, Smith's Corn Sheller; it is now daily in operation, and shells, with three hands to feed it, one hundred bushels of shelled corn per hour; the work being done in a handsome and complete manner. It is attached to the Horse Power I bought of you last summer, and run by it."

WHEAT IN INDIANA—M. AVERILL, Esq., of Lima, La Grange county, Indiana, informs us that the wheat crop in that section, for 1847, was very light. It suffered much by the winter, and afterwards from the attack of the fly. In relation to the quantity of wheat on hand, Mr. A. says—"I see it frequently mentioned in eastern papers, that the *'Farmers of the West,'* were, to a great extent, holding back their wheat crop for spring market; but so far as the four counties in the north and northeastern parts of this state, and the south and southwestern counties of Michigan, and a *large part* of Illinois and Wisconsin are embraced in these conjectures, it will certainly be found to be *a great mistake*, as I believe there has not been a season in the last four or five years, when there was any thing like so *small* a quantity of surplus wheat, retained in the country as at this time; nearly the entire surplus went forward in the fall, and is sold."

BEST MANNER OF WINTERING STOCK.—At a late discussion in relation to the above subject, by the "North Stockbridge (Mass.) Farmers' Club," it was almost the unanimous opinion of the members, that it was best to feed wholly under cover, as being most economical, both as to saving of food and manure. Several farmers spoke of the benefit of feeding cows "rye mush" for a short time before they calve. It was also the general opinion that much loss was sustained by farmers, from their stock being allowed to get poor at the setting in of winter, and it was advised to guard against this by feeding well at first. It was thought that hay was generally cut too late. It was advised to feed stock a little at a time and often—five or six times in twenty-four hours.

GOOD CROPS IN VERMONT.—The agricultural society of Washington county, Vt., awarded premiums for the following crops of Indian corn: 1st premium, 106 bushels per acre; 2d do. 100; 3d 86½; 4th, 80½ bushels. In the latter case, the whole crop was shelled and measured; in the former cases two bushels of ears were taken as the equivalent of a bushel of corn. The same society also awarded premiums for the following crops of potatoes: 1st premium, 310 bushels per acre—variety, Long-Red, or Merinos; and 2d premium 285 bushels, round Pink-Eyes. (The same person also produced 285 bushels Long-Reds per acre.) The 3d premium 205 bushels per acre, Pink-Eyes. All the crops of potatoes were free from rot. They were produced, mostly, on "loamy" soil. Some of the crops having been on sward, broken up the previous fall, and others on stubble ground—oats, on sward, having been the previous crop.

GOOD HOGS.—H. K. STARKWEATHER, of Northampton, states in the Massachusetts Plowman, that he killed three hogs, 17 months old, whose dressed weight were 410, 468, 570 lbs. The lightest one had a litter of pigs in August. Another hog of the same litter as the above, was killed in December, and weighed 450 lbs. They were a cross of the Mackay stock, derived from P. LATHROP, Esq., of South Hadley. Mr. S. attributes their superiority to the Mackay stock—says he took "far less pains than usual in fattening them," and that his old stock could seldom be brought, with any feeding, to the weight of 400 lbs.

ENORMOUS PROFITS OF FARMING.—A correspondent of the Boston Cultivator, states the success of a man who left a lucrative business in the city of Philadelphia, for farming, to make a *profit*. After two years trial, he was asked if he did not find the profits small, compared with those of trade? He answered, "Quite the contrary; *I have already realized far more than the most* I had dared to anticipate, *and am, at the end of two years, richer than I ever could have become by twenty-five years of successful trade.* It is true I made more dollars and cents in trade than I do now, but

that is *dross*, compared to the blessings of health of body, and peace of mind, which gold and silver could never purchase. I eat, drink, and sleep, with an appetite; yawn at bed time, and never in the morning; am up before the sun, and yet the day is never too long; and more than all, I have no acceptances to take up. Money! why what use have I for it? I raise my own food in the richest profusion, and my own clothing —my estate is annually increasing in value—then what is the use of money? I can't eat it or drink it, even if it were cut into mince meat."

Good Roads.—Lord Bacon regarded successful gardening as the last touch of civilization—"when nations grow to civility and elegancy, men come to build stately sooner than to garden finely"—but we slightly differ from him—*good roads*, it strikes us, are about the ultimatum. The rich, fertile, very narrow valleys in Hamilton county in this state, can never be valuable, because there is not land enough to warrant the working of good roads. Nearness to market—to say nothing of nearness to meeting—is worth a great deal to a farmer. Ten miles, through deep mud, in five hours with half a load, is quite a different thing from ten miles in two hours, over a fine smooth road, with full weight. What is the reason that farmers give so little attention to the improvement of their roads? The same deep mud-hole is plowed into by one hundred different teams for months together, when a few loads of gravel would make it fine. Or the same steep hill is ascended and descended fifty to five hundred times a year each, by a hundred different farmers, which a new road passing round the hill would wholly avoid. Farmers seem to be waiting for *plank-roads* to *grow*—and a friend has even suggested the plan of trying to procure some of the *seed* to sow along the rich bed of mud which connects all our towns and villages. We think, however, that even the laborious industry of the ancient Peruvians would be preferable—where, according to Prescott, roads of more than a thousand miles in length were made of huge flag-stones, connected by bituminous cement, the remains of which still exist.

Fecundity of Bees.—The number of bees in one hive, of strong stock, produced from spring to midsummer, is estimated at 20,000 to 30,000.

Long Tunnel.—A tunnel is now in construction 2¼ miles long, directly under the city of Liverpool, to connect the great railroad back of the town with the shipping in front of it. Many of the finest buildings will be only 50 feet above the roll of the locomotives.

Sewage Manure.—The report of the sanitary condition of the city of Sheffield, England, shows that the fertilizing substances carried off in the sewers of that town, which contains 110,000 inhabitants, is equal, annually, to the enriching power of 3,140 tons of guano, in value £30,000, or $140,000.

Merry's Museum.—This well known and popular journal for youth, is now published by G. W. & S. O. Post, New-York, at $1 a year. It is edited by S. G. Goodrich, author of Peter Parley's Tales.

Keeping Dried Fruits.—A correspondent wishes information in regard to preserving apples and other dried fruits through the summer season so that they will not become "wormy." Will some one tell us?

A good rule in awarding premiums.—In awarding premiums on cows and heifers, for the Essex county (Mass.) Agricultural Society, the committee say they have made it their aim to "reward the care and skill of the owners of cows and heifers, in training and keeping them in the best and most economical manner, rather than to reward *good fortune* in finding and purchasing those already trained and expensively fed by others. For this reason, where there were two animals equally balanced as to merit, the one purchased and the other raised and trained by the claimant himself, they thought it their duty to give the preference to the latter."

De Ruyter Farmers' and Mechanics' Association.—We learn that an association with the above title, has been formed at De Ruyter, Madison county, N. Y. Its object is the advancement of knowledge relating to agriculture, manufactures and arts. The officers are a president, three vice-presidents, librarian and treasurer. The association meets for four months in the year, (during the winter,) once in two weeks, and once a month for the remainder of the time. At those meetings, discussions are held on various subjects, and each person gives his own views and practice. We learn from the president, Hon. Benj. Enos, that a Library, consisting of the most approved works on agriculture and the arts, has already been commenced, and that it is intended to increase it by annual additions. Provision has also been made for the delivery of Scientific lectures before the association.

Another great benefit which will accrue from this combination of intellect and effort, will be the production of essays and articles on subjects connected with the business in which the members are engaged. Thus one person may take up a particular branch of agriculture—the cultivation of fruit or Indian corn or wheat, or the management of any kind of live stock—another person some department of manufactures or arts and show the whole philosophy, and the practical bearings and operations which are involved. Such papers would be highly interesting, and coming mostly from practical men, would receive attention.

We would suggest the adoption of the same system by Farmers' clubs, and similar associations.

The last Smithfield Cattle-Show.—As a matter of interest to many persons in this country, it may be well to preserve a record of the decisions made at the last show of the celebrated Smithfield Club, which took place in London from the 8th to the 12th of December last. There were one hundred and twelve fat cattle exhibited. This is a less number than has been brought out at some former shows, but the general quality of those presented on this occasion, was acknowledged to be superior to those of any previous exhibition. The prizes were more scattered among the various breeds, than they have generally been heretofore. In the six first classes, embracing oxen and steers, and containing twelve prizes, the Devons carried six, the Short Horns three, the Herefords two, and West-Highland one. In cows and heifers there were three classes, embracing seven prizes, of which the Short Horns carried three, mixed Hereford and Long-Horn one, Hereford one, mixed Hereford and Short-Horn one, and Long-Horn one. The Gold medal for the best ox or steer, was awarded to a Short Horn, and the Gold Medal for the best cow or heifer to a mixed Hereford and Long-Horn. The great contest among the oxen and steers appeared, to be between the Short-Horn ox of Mr. Manning, and the Hereford of Mr. Taylor. Both animals were four years old, and of a quality which it is said, "were never exceeded." The gold medal was finally awarded to the Short-Horn; though the decision of the judges has been somewhat controverted.

Apples in Alabama.—The Alabama Planter states that during the past summer the Mobile market was well supplied with apples, the growth of the immediate vicinity. Among them were "large greening pippins, [Newton] and russets of the Northern States. The first grew remarkably large." Trees brought from the north attain a large size in five or six years; and the standard winter apples of Massachusetts ripen by the end of the summer months. This early maturity and their large size, so alter the character of these fruits, that they would scarcely be identified with those of northern growth.

STATE OF THE MARKETS.

New-York, Feb. 18, 1848.

The latest foreign news has had but little effect on the Flour and Grain market. Genesee flour is firm at $6.25 *a* $6.37½—Ohio and Michigan, $6,12½. Genesee wheat is worth $1.35*a*$1.36—Corn, 55*a*57c—Rye, 90c—Oats, 40*a*42c—Barley, 80*a*85c. In provisions there is not much doing. Mess beef is worth $9 per barrel, and mess pork $9.75. Goshen butter, 20*a*22c. per lb.—western, 16*a*18c.; and Ohio, 12½. Cheese 6¼*a*7c per lb—Cotton, New Orleans and Alabama, per lb., 7*a*9¾c—Upland and Florida, 7*a*8¼c. Wool is rather dull at about the same quotations as last month.

AGRICULTURAL IMPLEMENTS AND SEEDS.

Ruggles, Nourse & Mason,

Inventors & Manufacturers of the genuine Eagle Plows.

TO their extensive assortment of Plows they have recently added new patterns, embracing many important improvements, in form, construction and fixtures, which adapt them to both shoal and deep plowing. The peculiar form of the mould-board to take up the furrow slice and turn it over in the most perfect manner, with the least power of draft, leaving the soil in the best possible condition for after cultivation, and production of crops. The acknowledged strength and durability of the castings, the uniform construction and superior finish of the wood by machinery, are among the characteristics of their Plows.

At the most full, perfect trial and investigation of plows ever had in this country, held at Essex, county Mass., the Judging Committee, in speaking of the Improved Eagle Plow, to which they unanimously awarded the highest premium, say:—"As near as we can ascertain, this Plow combines all the good qualities manifested in either of the others, with some peculiar to itself;" and further, "our attention was called to the *quality* of the castings on the Plows of Ruggles & Co, their *finish* and *durability*. Their appearance is certainly more perfect than any thing we have elsewhere seen." "The process of Chilling the Point, the entire Edge of the Share and Flange or Base of the Landside, gives a permanence and durability to the work that renders it of a decidedly superior character," "and we think there is no hazard in saying that the value of the parts thus made is more than doubled by the process."

The following is a copy of their table showing the comparative amount of power in pounds, required to operate the different plows.

Medium Size Plows.

Winslows's	of Danvers,	462 lbs.
Ruggles & Co.,	of Worcester,	412 "
Prouty & Co.,	of Boston,	425 "
Howard,	of Hingham,	412 "

Large Size Plows.

Winslow	of Danvers,	512 lbs.
Ruggles & Co., Eagle,	of Worcester,	425 "
Prouty & Co., Sod A	of Boston,	487 "
Howard,	of Hingham,	450 "

In 1846, the first premiums were awarded to competitiors who used Plows made by Ruggles, Nourse and Mason, at Plowing matches in the following named counties, to wit: Essex, Middlesex, Worcester, Hampshire and Berkshire, in Mass.; Orleans and Windham, Vt.; Kennebec, Me.; Litchfield and Hartford, Conn.; Prince George's and Montgomery counties, Md.

At the Cattle Shows held in 1847, the following premiums were won by Plowmen with Plows manufactured by Ruggles, Nourse & Mason.

ESSEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No 2.
" "	3d Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 25.
" "	2d Premium,	"	Eagle Sward B.
" "	3d Premium,	"	Eagle No. 25.
Horse Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 2
" "	3d Premium,	"	Eagle No. 2.
Subbsoiling,	1st Premium,	"	Eagle S. S. No. 1.

MIDDLESEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
Doule Team,	1st Premium,	"	Eagle No 20.
" "	2d Premium,	"	Eagle No. 20.
" "	4th Premium,	"	Eagle No 25.
Horse Team,	1st Premium,	"	Eagle No. 2.

BRISTOL COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Sward C.
" "	2d Premium,	"	Eagle No. 2.
" "	4th Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 20.

BARNSTABLE COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No 2.
Double Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No 2.
" "	3d Premium,	"	Eagle No. 2.
Horse Team,	1st Premium,	"	Self Sh'ng No. 3.

HAMPDEN COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 1
" "	6th Premium,	"	Eagle No. 2.

BERKSHIRE COUNTY, MASS.

1st Premium, and 7 others, Plows, Eagle Nos. 1 and 2.
1st Premium for the best Plows.

HAMPSHIRE COUNTY, MASS.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	7th Premium,	"	Eagle No. 2.
	8th Premium,	"	Eagle No. 2.

MERRIMACK COUNTY, N. H.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	2d Premium,	"	Eagle No. 20.
	3d Premium,	"	Eagle No 2.

WASHINGTON COUNTY, VT.

1st Premium, Plow, Eagle No. 2.

HARTFORD COUNTY, CONN.

	1st Premium,	Plow,	Eagle No. 25.
	2d Premium,	"	Eagle No. 2.
	3d Premium,	"	Sward D.

ROCHESTER, MONROE COUNTY, N. Y.

Horse Team, only used	1st Premium,	Plow,	Sward C.
	2d Premium,	"	Eagle No. 25.

MONTGOMERY COUNTY, MD.

1st Premium for 3 horse sizes, Eagle No. 25.
1st Premium " 1 " " Self Sharpener No. 1.

They have also constructed a series of new patterns of plows of various sizes and forms, (some with wrought mould plates, shares, or points,) expressly calculated for the different *kinds* and *methods* of cultivation practiced in the Southern States, and which embrace all the alterations which a long and thorough investigation, and more extended acquaintance with southern culture has suggested, to render them peculiarly adapted to the wants of the planters.

Their stock of Garden and Field *Seeds* are raised especially for their trade, by most reliable and experienced growers, and are warranted fresh, and true to their names.

Their prices being *uniform*, purchasers can rely on having all orders executed on as favorable terms, and promptly as though they were personally present.

Dealers supplied on the most advantageous terms.

A supply of PLOWS and other articles from their establishment may be found at the stores of L. Tucker, Albany; A. B. Allen & Co., New-York city; R. L. Allen, New-Orleans; and at many other cities and principal towns throughout the country.

P. S. As it is impracticable here to give a detailed list of articles embraced in so great a variety, the proprietors propose to forward, (*gratis*) to persons requesting them, by mail or otherwise, descriptive catalogues of implements and seeds, of nearly 100 pages, embellished with cuts of tools, and embracing brief directions for sowing, planting and culture, rules for the application of Guano, Plaster and Bone Dust, with remarks on soils and plowing; and with general observations, list of agricultural and horticultural publications, &c. &c.

Worcester and Boston, Mass., March 1, 1848—3t.

OFFICE FOR PATENTS.

P. H. WATSON, Attorney and Solicitor of Patents, Washington, D. C., prepares specifications and drawings, and solicits letters patents for new inventions, in this country and in Europe; and transacts with promptness all business belonging to his profession, for which his charges are moderate.

Persons at a distance, by sending a model, or a pen and pencil sketch with a short description of an invention, by letter, may be informed whether it be patentable, and how the patent can be obtained, without the expense and inconvenience of a journey to Washington. Those who desire to send models, can do so with entire safety, by boxing them and forwarding them by any of the Expresses which run between this city and almost every part of the country.

He was at one period, for some years engaged in farming, and is also a practical machinest and millwright, and therefore, well qualified to judge of the utility and patentability of agricultural implements and machinery, as well as of improvements in the mechanic arts generally; and can readily understand the several parts of an invention from a rough drawing and description.

Those who may visit the city to make personal examinations of the models of patented inventions, records, &c., preparatory to applying for letters patent for their own inventions, would find it to their advantage to call upon him immediately upon their arrival, as he can furnish them with such information as will greatly facilitate the transaction of their business, and materially aid them in securing their rights.

Persons are frequently subjected to long and tedious delay and accumulated expenses, in obtaining patents, in consequence of having their papers and drawings imperfectly, or improperly prepared; and when obtained, after so much trouble and cost, the patent often fails to protect the invention, from the same causes which produced the delay. All these difficulties may be avoided by the employment of a competent and faithful agent residing at the *Seat of Government*, where he has daily access to the models and specifications of patented inventions, and other sources of information that do not exist elsewhere, which enables him to draw up specifications that will amply secure the just claims of the inventor, and at the same time avoid an interference with old inventions. By this means the rejection of an application is prevented, and a strong and valid patent secured.

For evidence of his competency and integrity, he would respectfully refer to all persons for whom he has transacted business.

Office on F street, between 7th and 8th streets, opposite the United States Patent Office. March 1, 1848—1t.

BLACK SEA SPRING WHEAT.

A SUPPLY of the above on hand at the Albany Agricultural Warehouse and Seed Store, Nos. 10 & 12 Green-St, Albany.

FRUIT TREES, *of Select Varieties,*

PROPAGATED from trees, whose genuineness or excellence has been proved by thorough examination of the fruit in bearing For sale at the nursery of the subscriber.

☞ Persons wishing to set out new Fruit Gardens or Orchards, will, if they wish, be furnished with a carefully assorted collection, either large or small, of apples, peaches, cherries, nectarines, apricots, strawberries, hardy grapes, &c., of the best standard varieties, which have been selected after several years careful personal examination, *from several hundred sorts in bearing.*

A fine select assortment of ornamental shrubs, brilliant hardy roses, herbaceous perennial plants, evergreens perfectly hardened for transplanting, &c.

Orders with remittances promptly executed, and trees packed in bundles so as to be sent with perfect safety by canal or railway. Catalogues furnished gratis to all applicants. All communications to be post-paid, and directed, J. J. THOMAS,

March 1—2t. Macedon, Wayne Co., N Y.

ISABELLA GRAPES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post-paid, addressed to R. T. UNDERHILL, M. D., 310 Broadway, New-York, till the 25th of April, and after that time to Croton Point, N. Y., will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well, and produce good fruit when planted in most of the northern, and all of the western, middle, and southern States.

New-York, March 1—2t.

FRUIT AND ORAMENTAL TREES.

THE subscribers respectfully solicit the attention of fruit growers and dealers in trees, to their large stock offered for sale the ensuing spring, consisting in part of

FORTY THOUSAND APPLE TREES

of the most esteemed varieties, from 4 to 8 feet high, at $12 to $20 per 100; and $100 to $150 per 1,000. 8,000 trees of the Northern Spy, (one of the very best and long keeping apples known,) 5 to 7 feet high, 37½ cts. each, or $25 per 100—3 to 5 feet high, 25 cents each, or $18 per 100. 1,000 trees of the Early Joe, (a new and delicious summer apple, ripens August and September,) strong yearling trees, 25 cents each. A few hundred trees of the Melon, a native apple of western New-York of the highest excellence—described in the Horticulturist of February, 1848—price 50 cts. each. A number of select varieties are worked on *Paradise* stocks, adapting them to small gardens. These are one year from bud, of vigorous growth.

TWENTY THOUSAND PEAR TREES

of various sizes, from 3 to 7 feet high, embracing upwards of 200 of the best varieties to be found. 6,000 of these are on quince stocks (mainly one year from the bud but very vigorous) just right for training as *Dwarfs, Espaliers* and *Pyramids.* A few hundred trees each of the Swan's Orange or Onondaga, and the Belle of Brussels, (two unrivalled large rare fruits,) also Oswego Beurre, mostly strong yearlings, at $1 each.

FIFTEEN THOUSAND CHERRY TREES

from 4 to 9 feet high, of the finest sorts, 5,000 of them being 2 years old from the bud, with fine heads. Price $25 to $40 per 100. A few hundred fine trees can be supplied, budded on the *Cerasus mahaleb,* forming dwarf trees adapted to garden culture.

TWELVE THOUSAND PEACH TREES,

vigorous and free from all diseases, of 25 best market sorts; at $12 to $18 per 100, and $100 to $150 per 1,000.

Also, a large stock of all other hardy fruits, as well as

ORNAMENTAL TREES, SHRUBS, ROSES, &c., &c.,

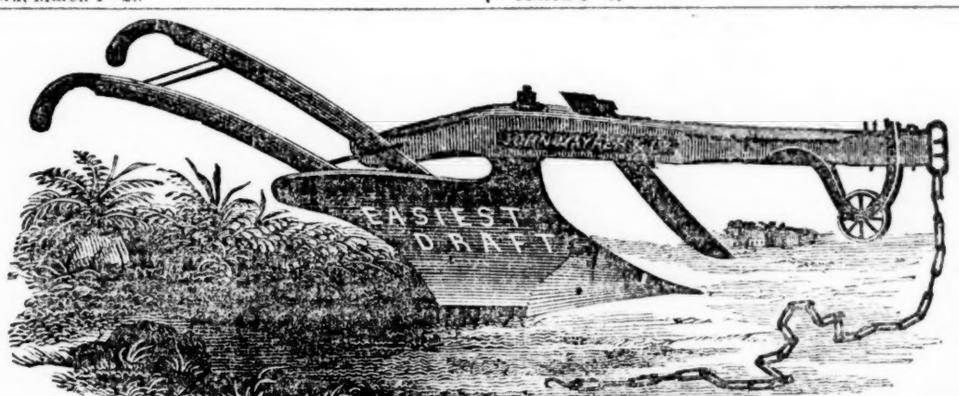
at low rates by the quantity. The correctness of every article guarantied.

Orders promptly executed, and trees and plants packed for safe transmission to any part of the United States, Canada, or Europe. Priced descriptive catalogues of Nursery and Green House department, sent gratis to post-paid applications. Address

ELLWANGER & BARRY,

Mount Hope Garden and Nurseries, Rochester, N. Y.

March 1—1t



JOHN MAYHER & Co's.

Highest Premium Improved Eagle Plow,

Manufactured and sold at the United States Agricultural Warehouse, 195 *Front-St., N. Y.*

THESE Plows combine new and important improvements, adapted to the different qualities of soil, and the various modes and systems of culture. Their Eagle Plows, as improved, are much longer; the mould board, landside, and share, are extended without any addition to the draught of the plow, thus adapting this plow to the more perfect turning and running under the green sward, and inverting the furrow slice, so desirable in green sward plowing—the principle of these plows is such, from where the furrow is received upon the mouldboard to where it leaves it, that it enables the plow to take up the furrow slice with the greatest possible ease, bearing equally and lightly upon the whole surface of the mouldboard, turning it over with the least possible bending or twisting, and preserving it flat, smooth and unbroken; laying the furrow slice closely and compactly side by side, and creating but slight friction upon the face of the mouldboard. Passing through the soil thus, the plow requires very little power of draught beyond what is required to cut out the furrow slice. In testing the quality of these plows, the power by which they are moved—the ease with which they are handled, and the manner in which they complete the work, are three important points, all of which are wisely, accurately and judiciously preserved. The character of these plows for ease and draught and management, and the excellence of their work, though well established in the minds of the community, was most fully exhibited to the public at the grand trial of plows by the American Institute at Harlem and Long Island October, 1847, whose able and impartial committee awarded the highest premium to J. Mayher & Co., for the best plow for doing the best work with the least draught, (in a trial open to the whole Union,) running in its natural course, and keeping in its true position without any effort of the plowman, and turning a furrow 12 inches wide and 6 inches deep, with a much less draught than any other plow on the ground, among which were the Bergen Plow, Minor and Horton Plow, John Moore's Plow, and B. Myers' Plow, of Newark. The Eagle Improved Plow of J. Mayher & Co., was at the late trial pronounced by the committee and experienced farmers to be the nearest perfection of any implement of the kind in this country, in respect to materials, workmanship, and in form of construction. The castings are of superior kind, they are made out of the strongest kind of cast iron, the point and edge of the share and base of the landside, are steel chilled hardened, and will wear out six shares and landsides of the common plows; the workmanship of this plow is nothing inferior to any in the country; the timber of which it is made is the best of white oak; every farmer knows that timber in his plow is of the utmost importance—all of which in fact renders the Eagle Plow the very article every farmer wants. The high character of these plows is abundantly sustained by a continued and extended patronage, which the manufacturers hope by their efforts and exertions to retain. Being experienced Plow Makers, they will not spare any exertions to render their plows superior to all others.

They have also for sale over one hundred different kinds of plows, all of the latest and most improved kinds, together with the most extensive assortment of Agricultural Implements ever offered in the city of New-York, among which may be found a large assortment of Harrows, Cultivators, Wheelbarrows, Ox Yokes and Bows, Shovels, Spades, Hay and Manure Forks, Rakes, Hoes, Scythes, Sneaths, Cradles, &c., &c., all of which they will sell cheaper than they can be purchased in any other store in the United States.

JOHN MAYHER & Co.,

United States Ag. Warehouse, No. 195 Front-st., N. Y.

March 1, 1848—3t.

AGRICULTURAL AND GARDEN SEED WAREHOUSE.

RITCHIE & EADIE, 139½ Market-street, Newark, N. J., beg to announce to their friends and the public that they have on hand their spring assortment of Garden, Field and Flower Seeds, the greater part of which having been raised by themselves, they can with perfect confidence guarantee as pure and of good quality. Merchants and others who sell again will be supplied by the pound or bushel, or with boxes containing papers neatly closed and labelled, ready for retail on the most reasonable terms.

The subscribers have also constant communication with the best Nurseries in this country and Europe, and supply fruit and ornamental trees of every variety on the most favorable terms. Ladies and gentlemen will find this a good channel for obtaining any specified varieties of fruit or ornamental trees, shrubs, &c. They also supply all sorts of Agricultural Implements, Corn Shellers, Straw Cutters, Ploughs, Cultivators, &c. &c. of various qualities and the most approved constructions.

The subscribers are also agents for the Cultivator and Horticulturist. Catalogues furnished on application, if by letter post-paid.

Newark, N. J., March 1—1t. RITCHIE & EADIE.

FINE FARM FOR SALE.

THE subscriber offers for sale a beautiful Farm, of one hundred and sixty acres, under a high state of cultivation, within one and a half miles of the town of Greencastle, Putnam county, Indiana, (the seat of the Indiana Asbury University.) It has been occupied as a sheep farm for the last three years, to which it is well adapted; being all laid down to grass, well watered, with good timber, and limestone in abundance. The barns, fences and outhouses are new and convenient. A fine large orchard, embracing all kinds of choice fruit trees. To a gentleman desirous of educating his family, it offers an opportunity seldom to be met with in the west.

March 1—3t. A. H. NICHOLS.

A VIRGINIA FARM AND WATER POWER FOR SALE.

A BEAUTIFUL and highly productive Farm of 350 acres, on James River (west), of which a large proportion is low grounds, situated near Richmond. The canal running through it—well adapted to wheat, corn and tobacco. The situation is one of the most commanding and beautiful to be found; is healthy and well watered, and has a good market for all vegetables, meats, &c. There is a crop of wheat, new seeded. There are also two or three good water sites, with a plentiful supply of water for a factory of any kind; a most excellent dwelling, and all kinds of outhouses, such as barns, corn houses, negro quarters, overseer's house, stables, cow houses, threshing machine.

The property is now in excellent order, having just been all thoroughly done up and repaired; and the purchaser will not need any outlay after the first cost. It is well known, by actual survey, to possess valuable minerals, such as coal and iron. The whole will be sold very low, if application be made before the tenth of April next; and the purchaser can take, at his option, all the tools, stock, crop. And for particulars, apply to A. B. C. D.

Richmond P. O; or to

March 1—2t. LUTHER TUCKER, Esq.,
Editor Cultivator.

OSAGE ORANGE, YELLOW LOCUST, AND BUCKTHORN SEED.

THE above, together with a general and complete assortment of fresh Field and Garden Seeds, for sale by

A. B. ALLEN & CO.,

Feb. 1, 1848—tf. 187 Water-st., New-York.

SEED SOWERS.

FOR sale at the Albany Ag. Warehouse, a large supply of EMERY'S SEED SOWERS, on hand, and being made for spring sale. The manufacturer has been awarded the N. Y. State Ag. Society's first premium. He also received the first premium at the Fair of the Mechanic's Association, held at Boston in September last. Feb. 1, 1848. H. L. EMERY.

NEW AGRICULTURAL WAREHOUSE.

SAMUEL C. HILLS, No. 189 Water-st., New York, offers for sale Prouty's Plows and Horse Rakes, Wilkinson's Harrows, Corn Mills, Corn Shellers, Straw Cutters, Horse Powers, Churns, Grain Cradles, Scythes, Hoes, Rakes, &c., &c.

Patents secured upon moderate terms, and patent articles and rights bought and sold on commission.

New-York, Jan. 1, 1848—3t.

GRAPE VINES.

10,000 Isabella Grape Vines; **6,000** Catawba do.; **4,000** Alexander or Muscadel do; of suitable age and size for forming Vineyards. **1,250** Catawba Vines, four years old, will produce fruit in 1848, suitable for gardens. For sale in large and small quantities on the best terms. Purchasers of vines from the subscriber will receive, free of charge, a practical treatise (just ready for the press) on the cultivation of American Grape Vines, and the manufacture of Wines, treating particularly of soil, location, planting of vines, manuring, training and pruning, illustrated with plates. Vines will be packed so as to be sent to any part of the world with safety. Letters of inquiry, *post paid*, promptly attended to. Apply to B. G. BOSWELL,

Feb. 1—2t. 230 Pine-st., Philadelphia.

15,000 Buckthorn Plants.
10,000 Osage Orange Plants.

Also, Buckthorn Seed by the pound or bushel. For sale by

Feb. 1. L. TUCKER, Ag. Warehouse.

TAR PAINT AND LIME.

TAR PAINT for sale at the Albany Gas Works: A *very cheap* article for covering barns, &c.

LIME for sale at the Albany Gas Works, *cheap*.

Oct. 1—6t.*

ENGLISH AND FRENCH GRASS SEEDS.

THE subscribers have just received from England and France, a superior lot of *fresh* Grass Seeds of various kinds. Among these are the Perennial and Italian Ray Grass, Sweet Vernal and Oat Grass, fine mixed Lawn Grass, White Clover and Lucerne, English Beans, Vetches, &c., &c. A. B. ALLEN & CO.,

Feb. 1, 1848—tf. 187 Water-st., New-York.

FRUIT AND ORNAMENTAL TREES, GRAPE VINES, &c.

BLACK Hamburgh, White Muscat of Alexandria, Royal Muscadine or Golden Chasselas, Early White Sweet Water Grape Vines, strong plants, raised from single eyes in pots and shifted, roots two years old and abundance of them, stems one year old, 6 feet ripe wood, price $5 for 6—$9 per dozen: *Cash with the order.* Taken out of the pots, carefully packed, the roots with the balls of earth in moss, and forwarded from New-York as directed. Also, good one year old plants of the above and other foreign varieties, at $6 per dozen; and superior *Isabella* vines, 3 years old, for speedy bearing—$4 for six, and $7 per dozen: packed, &c. Also, other native varieties, and every description of *Fruit and Ornamental Trees, Shrubs, Vines, Plants, Roses, &c.*, including the newest and choicest varieties, for sale *at moderate prices*, at the *Ancient* and *Real Linnæan Botanic Garden and Nursery*, late of *William Prince*, deceased, Flushing, L. I., near New-York. Descriptive Catalogues gratis, on application *post-paid*.

Feb. 1, 1848—2t. WINTER & Co., Proprietors.

FINE BLOOD MERINO SHEEP FOR SALE.

THE subscriber being about to retire from the farming business, offers for sale his entire flock of Merino sheep, which have been bred with the greatest care from the best flocks in the country. Of these 75 are ewes now with lamb by a buck from the recent imported flock of John A. Taintor, Esq., of Hartford, Conn.; 25 bucks one year old last spring from the above ewes, sired by the Rambouillet buck Chancellor; and 50 lambs the increase of last year, sired by the Rambouillet buck Grandee, now owned by the Rev. L. G. Bingham, of this place. As to purity of blood, fineness and weight of fleece, and strength of constitution, they are excelled by no Merinos in the country. The buck purchased from the recent importation of Mr. Taintor will also be offered for sale. To those wishing to improve their sheep, or those wishing to start a good flock, the present offers a rare opportunity, as they will be sold without reserve. Communications addressed to the subscriber will receive immediate attention THOS. D. CANFIELD.

Williston, Vt., Jan. 15, 1848—3t.

THE AMERICAN ARCHITECT.

Published Monthly, at $3 per annum—Single numbers 25 cents—by C. M. Saxton, 205 Broadway, N. Y.

THE object of this publication is to introduce ORIGINAL DESIGNS of *Country Seats*, adapted to the varied tastes and circumstances of an American population—from the elegant Villa to the simple Cottage and plain Farm-House; from Planters' Mansions to Village Domicils. In a word, every variety of Rural Residences will be embraced in order to meet the views of every person desiring a Country House. In respect to style, cost, arrangement, finish, &c., utility will never be sacrificed: economy in the outlay, with an appropriate style, will always be kept in view. The requisite details, specifications, plans, and directions, with a careful and reliable estimate of the cost, will accompany each design. These are essential features of a *Practical Work*—and no labor will be spared in their preparation.

Of the diversity of human dwellings, whether marked by elegance, convenience, or utility, or by the want of them, none can compare in national importance and philosophical interest with the FARM HOUSE—the Homestead of our species.

The selection of designss by those about to build Country Residences, is commonly attended with embarrassment, and always with expense. When furnished by professional men from general ideas communicated by proprietors, they are seldom satisfactory. The AMERICAN ARCHITECT, by furnishing a collection of designs adapted to all tastes and means, will remove every difficulty in the choice, and save money expended on plans of no use. It will furnish 12 Elevations, Plans and Specifications in each year, at a price not exceeding one seventh of the usual charge for one.

"The price is only 25 cents for each number, and it is surely next to impossible but that such a periodical will obtain a wide circulation."—*N. Y. Tribune.*

"This work promises to supply a want which has long existed, and to be of essential value."—*Salem Register.*

"This work cannot fail to be useful and popular."—*Boston Bee.*

"This is a good and beautiful work, and well adapted to effect a much desired reform in Am. Architecture."—*Boston Trav.*

The *cost* of building from the plans given, will be from $600 to $5000, with complete specifications from a first rate Mason and Carpenter, and the prices given can be depended upon.

New-York, Jan. 1—3t.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

200,000 Grafted Apple Trees, from 1 to 5 years' growth, 60,000 of which are from 6 to 9 feet high; 3 to 5,000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8,000 Pear Trees, 4 to 7 feet high.

A few hundred of the Onondaga, and Van Mon's Leon Le Clerc, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to $1.00 each.

1,000 Cherry Trees, 6 to 9 feet high.

10 to 15,000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.

3 to 500,000 Apple Seedlings, from two to three years old, and unusually large.

Also, a large quantity of Horse Chestnut, Ailanthus, and Mountain Ash, of extra size, and good form, together with all the desirable varieties of the Grape.

All post-paid communications and orders containing remittances, promptly attended to. THORP & SMITH.

Syracuse, N. Y., Nov 1—6t.

N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATOES,

COMPRISING several sorts of Pinkeyes, Russets, Purples, Reds, Whites, Rareripes, Orange, and others not yet fully developed. All purely Seedling—the product of a careful and expensive experiment of six years with the seed from the balls and its Seedlings in alternate reciprocal culture *Reciprocal*, because in each rotation the seed improves the Seedlings, and the Seedlings the seed. By this method of culture these potatoes have acquired a *healthy* and *early* character, are *very productive* and of the *finest quality*. Having been for so many years in succession planted in April, (in their seed,) and early harvested, they have become *constitutionally* what they are, and with early planting, early digging, dry and airy storage, they will prove *sound* and *durable*—and the method continued, the development of new varieties and improvements will also continue.

Also, "N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATO SEED." This seed was gathered in the balls last September from a four acre crop of Seedlings, from improved seed sown in April last. Six years alternate reciprocal culture with its Seedlings, has given it an *early* and *very productive* character. It will produce Seedlings of the size of small birds, eggs as early as in May. Season favorable, with good culture, it will produce the first season sown, about 200 bushels per acre, a good proportion of marketable size, sufficiently mature for the table, and seed balls in abundance. Tubers of the weight of 12 oz. were quite common among the young Seedlings last fall, and on the roots of many single plants were found fully set and growing, hundreds of Seedlings, though when so numerous, mostly small. In addition, this seed is impregnated (by the pollen in the blows) with choice varieties, late from Germany, England, South America, Albany, Illinois, and home markets—mostly Seedlings, interspersed for that purpose in the field; and it will represent, when cultivated, all the distinct varieties grown in that field, besides an amusing freak of mottling, tinting, and originality. The seed may be sown in April like tomatoes, in a warm bed. Bleached cotton cloth, tacked on frames for potato beds, is better than glass. The beds should be open to warm rains and to all warm weather. The same hands in a given time will transplant with the young plants more ground than can be planted with tubers. (*Particular* directions accompany the seed.) These potatoes and seed were represented at the two last State and County Agricultural Fairs, and the first premiums awarded them. The cultivation of these potatoes and their seed will be continued at Buffalo with every possible improvement. Seedlings of approved varieties carefully packed in chaff, and delivered at the wharf or depot in Buffalo, $5 per bushel—$10 per barrel. Transportation safe from frosts after February. Seed per paper—sufficient to produce 10 bushels—$1, with directions. It may be conveyed by mail with double postage. Orders and communications, post-paid, will receive prompt attention.

Buffalo, Jan. 13, 1848—3t. N. S. SMITH.

Extract from the Report of the Committee on Vegetables at the last New-York State Fair.

"The committee on vegetables have reported, that for the greatest and best varieties of Seedling potatoes of approved varieties, they award the premium of ten dollars ($10) to No. 73, presented by N. S. Smith, of Buffalo, N. Y. These potatoes were grown by the Rev. N. S. Smith, of Buffalo, who has favored us with the manner of their cultivation and production. He has been six years cultivating them from the balls that grow on top of the vines; his method is the alternate planting of the seed and tuber or potato, taking care to select always the best varieties. He has presented at the Fair as a specimen of his crop this season, thirty varieties of Seedlings, all of them evidently of fine quality. His specimens of this year's Seedlings, from the seed of his best Seedlings, are very fine. He presents, also, fine specimens of Seedlings from seed of Seedlings grown last year in Prussia, Germany, and fine varieties late from South America. Mr. Smith is confident, and the Judges favor the opinion, that in his experiments a great improvement in the potato is already accomplished; and he hopes to be able to obtain permanently, potatoes not only of the finest quality, but perfectly sound and hardy. The judges would recommend the attention of farmers to his specimens on the ground, and also to his mode of cultivation." Signed by DAVID GRAY, Chairman.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

JUST PUBLISHED, AN ILLUSTRATED TREATISE ON DOMESTIC ANIMALS,

Being a History and Description of the Horse, Mule, Cattle, Sheep, Swine, Poultry, and Farm Dogs

WITH directions for their Management, Breeding, Crossing, Rearing, Feeding, and preparation for a profitable market. Also, their Diseases and Remedies, together with full directions for the Management of the Dairy, and the comparative economy and advantages of working animals, the Horse, Mule, Oxen, &c. By R. L. ALLEN, author of "Compend of American Agriculture," etc.

The above work contains more than FORTY ENGRAVINGS and PORTRAITS of improved animals, illustrative of the different breeds and various subjects treated in it.

The most minute as well as general principles for breeding, crossing, rearing feeding, and management of all domestic animals, are herein given, to produce the utmost marketable value for the food and attention bestowed on them; as well as to prevent disease, and save the immense losses which annually occur from this source.

The diseases of animals are also fully treated, with their remedies, management, &c., &c. Published by C. M. SAXTON, 205 Broadway, N. Y.

Price, 75 cents, elegantly bound in cloth.

New-York, Jan. 1, 1848.—3t.

MOUNT AIRY AGRICULTURAL INSTITUTE.

THE subscriber having rented the MOUNT AIRY FARM, the late residence of James Gowen, Esq., with all its extensive and eligible appliances for the purposes of a *Farm School*, will remove his school, now the Duchess Agricultural Institute, of Duchess Co., N. Y., to the above place, where he will open for the summer term on the first Thursday of April next; after which it will be known as the Mount Airy Agricultural Institute.

The winter term will commence on the first Thursday of October. This farm, which is located on the Germantown road, 7 miles from Philadelphia, Pa, having been so long known as the model farm of the United States, the site being proverbially beautiful and healthful, a minute description is deemed unnecessary; suffice it to say, that it presents every inducement and desirable facility for the establishment and maintenance of an Experimental, Practical and Scientific Agricultural Institute.

The course of instruction will be such as to give the students every facility for acquiring a thorough knowledge of Scientific and Practical Agriculture, with the use of the best modern farm machinery and implements, together with a select farmer's library, including numerous Agricultural Periodicals. Instructions will also be given in all the collateral branches requisite to insure the great desideratum which it was the object of the founder and Principal to supply by an education commensurate with the exalted destinies of a landed interest.

Chemistry and the other Natural Sciences receive particular attention—lectures with full experimental illustrations being connected with each course. The Zoonic course will commence with the Horse, a perfect skeleton of which being provided for illustration.

The best facilities are also afforded, that those who desire may here acquire a Commercial Education, to the end that they may lay the foundation in youth of a future life that shall be agreeable, healthful and useful.

Fee for the year, $200, payable semi-annually in advance. This sum includes Tuition, Board, Washing, Fuel, and Lights. An extra charge of $12.00 per annum will be made for pupils not furnishing their own bedding and toilet furniture. The modern languages $10 each extra per term, as also drawing.

This Institution is under the patronage of the American Agricultural Institute, the Farmer's Club of the American Institute, and the Duchess Agricultural Society.

For further particulars address JOHN WILKINSON,
Principal of the Duchess Ag. Institute, Poughkeepsie, N. Y., and after the 20th of March at the Mount Airy Agricultural Institute, Philadelphia, Pa.

REFERENCES.

Jas. Gowen, Esq., Philad., Pa.,	Wm. A. Davies, pres't of Far. &
Robert Ewing, Esq., "	Manufac'rs Bank, Po'keepsie,
Zebedee Cook, Esq., N. Y.,	M. J. Myers, pres't Merchant's
Thos. McElrath, Esq., "	Bank, Poughkeepsie.
J. D. Williardon, Esq., N. Y.,	Rev. H. G. Ludlow, Po'keepsie.
Rev. F. A. Farley, Brooklyn,	Rev. A. Polhemus, Hopewell, N.Y
Sam'l Allen, Esq., N Y.,	Rev. S. Mandeville, Lagrange,
G. A. Amaux, Esq.,	N. Y.,
C. H. P. McLellan, Principal	Hon. Alfred Conkling, Auburn,
Po'keepsie Female Academy.	Robt. Farley, Esq., Boston, Mass.
Geo. Vail, Esq., Troy, N. Y	Wm. C. Gibbs, ex-goveror of
Benj. P. Johnson, Esq., Albany.	Rhode Island, Newport, R. I.,
H. Weed, Esq., Newburgh, N.Y.	Geo. W. Dobbin, Esq., Baltimore,
Cha's. Bartlett, Principal Collegi-	R. W. Crookshank, jr., St. John,
ate school, Poughkeepsie.,	NewBrunswick.

Feb. 1, 1848—2t.

CONTENTS OF THIS NUMBER.

COMMUNICATIONS.

Culture of Indian Corn, by F. HOLBROOK,..... 73
The Farmer's Song, by M. W. H.,..... 74
Notes of a Traveller in Great Britain, No. 9, by H.,..... 75
Running out of Varieties—Change of Seed, by H. A. PARSONS, 76
On the Culture of Onions, by J. W PROCTOR,..... 78
On Breeding Horses, No. III, by J. B. BURNET,..... 81
Diseases of Animals—Scours in Swine, by A. D.,..... 82
Cultivation of the Apple, by R. K. TUTTLE,..... 85
Descriptive List of Pears, by F. J. SCOTT,..... 86
Budding in the Spring, by A. YOUNG—Pear Tree Blight, by R. H,..... 87
Benefits of Reading Agricultural Papers, by S. A. LAW—On Fattening Hogs, by S. S. MOREHOUSE,..... 91
On Breeding Horses, by JUNIUS,..... 92
Suggestions to Farmers, by ONEIDA—Potato Disease, by Rev. C. A. GOODRICH,..... 93
Varieties of Wheat by J. L. COX—Good Hogs, by E. P. INGALLS,..... 94

EDITORIAL.

Preparation of Grounds for Wheat,..... 77
Potato Rot—Maple Sugar in Vermont,..... 80
Disease in Tails of Cattle—Remedy for Winter-kill,..... 82
Transactions of the Ohio Fruit Grower's Convention—Management of Fruit Trees, Pruning, &c.,..... 83
Care of Grape Vines—Grafting—Caterpillars, &c..... 84
Productiveness of Strawberries—Moss on Fruit Trees,..... 85
Grafting the Tree Pœonia—Fire Blight—Columbia Pear,..... 86
The Paulownia—Balsams—Correction,..... 87
Memoir of Elkanah Watson, Esq.,..... 88
Subsoil Plowing—Product of Good Cows,..... 92
Hints for March—Agricultural Discussions,..... 94
Agricultural Societies—A Convenient Swift,..... 95
Tin Vats for Cheese—Female Industry—Answers to Inquiries, 96
Monthly Notices—To Correspondents, &c.,..... 97

ILLUSTRATIONS.

Fig. 22—The Onion Hoe,..... 79
Figs. 23, 24—Illustrations of Pruning,..... 83
Fig. 25—Caterpillar's Eggs,..... 84
Fig. 26—Grafting the Tree Pœonia,..... 86
Fig. 27—Portrait of Elkanah Watson,..... 88
Fig. 28—A Convenient Swift,..... 95

HIGHLAND NURSERIES, NEWBURGH, N. Y.

NOTICE—A. J. Downing having retired from the Nursery business, heretofore conducted at this place under the firm of *A. J. Downing & Co.*, the same will be continued by the subscribers. They will not only endeavor to maintain the high character which those nurseries have had, but as the present stock is gradually drawn off Mr. Downing's grounds they will greatly enlarge the nurseries, and fully endeavor to meet the constantly increasing demand for trees grown here. A. SAUL & Co.

February 15th, 1847.

The undersigned strongly recommends the above Nursery firm to public confidence.

The practical management of the Nurseries will be in the hands of Mr. A. Saul, who has been at the head of this department for the last eight years, and his accuracy and fidelity in the propagation of fruits, and general care of nurseries during that time, are the best guarantee for the faithful and careful manner in which the business will hereafter be conducted. A. J. DOWNING.

Highland Garden, Newburgh, Feb. 15th, 1847.

A. SAUL & Co. beg leave to inform the patrons of this establishment and the public in general, that their stock of

Fruit Trees for Spring Planting, 1848,

Comprises nearly all the choice and rare varieties of recent introduction, among which are a fine stock of the *True Peach Plum*, (Prune Peche,) and Dubois' Early Golden Apricot, as well as a large stock, and full assortment of all the leading standard varieties; all propagated from *tested* fruit trees, or the most correct sources, under the personal supervision of A. Saul.

Their stock of ornamental trees is unusually large, (for particulars see Cultivator for October and November, 1847. Also Shrubs, Roses, Vines, &c. &c.: and as they propose clearing a large portion off of Mr. D.'s grounds this spring, to their new grounds, (10 acres,) they will dispose of a large portion of it at reduced rates to nurserymen, or amateurs who want to plant largely for the embellishment of new places. Also a fine stock of

5,000 American Arbor Vitæ, for screens, $15 to $30 per 100.
10,000 Osage Orange plants for hedges, $12 per 1000.
20,000 Buckthorn plants for hedges, $8 per 1000.

Orders addressed as above, *postpaid*, will receive prompt attention, and all trees, plants, &c. will be carefully packed and shipped to any part of the Union. Catalogues gratis to postpaid applicants.

Highland Nurseries, Newburgh, Feb. 10th, 1848.—2t.

HOPE-TOWN OATS.

FIFTY bushels Hope-Town Oats, raised expressly for the Ag. Warehouse and Seed Store, from seed imported the past season by the proprietors. They are much earlier than the ordinary oats raised here, ripening when sown side by side some two weeks in advance—yield well, and the kernel is large and heavy. Price, $1 per bushel.

For sale at the Albany Ag. Warehouse, Nos. 10 & 12 Green-St., Albany.

EAGLE PLOWS.

A FULL and complete assortment of the celebrated Eagle Plows, from the manufactory of Messrs. Ruggles, Nourse and Mason, constantly on hand and for sale at *manufacturer's home prices at wholesale and retail.* For prices, descriptions, &c., &c., see Catalogue of Albany Ag. Warehouse, furnished gratis at the Store Nos. 10 & 12 Green-st., or by mail to post-paid applicants. March 1.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine, will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings. A. R. HAIGHT.
March 1—5t*. 128 Fulton-st., New-York.

FRUIT SCIONS.

THE subscriber can furnish Scions cut from the celebrated "Northern Spy" Apple Trees for this season's grafting, at $1 per 100.

All orders per mail, with cash enclosed and postage paid, shall be attended to. They can be sent by Express or Mail to any region of country. Address me at Rochester, Monroe Co., N. Y.

March 1—1t*. JAMES H. WATTS.

POUDRETTE.

THE LODI MANUFACTURING CO. offer for sale their New and Improved POUDRETTE, at the following reduced prices: One barrel, $2; three barrels, $5; and seven barrels and upwards at $1.50 per barrel. It can also be obtained at their factory, on the Hackensack river, in bulk, at 25 cents per bushel, put on board of vessels or wagons. This is the most economical and effective manure for corn known. On good land, two barrels ($3 worth) will suffice per acre, and bring a good crop; the labor being less than one half of an application of dung to the hill. Office of the Company, 51 Liberty-street; and of A. B. Allen & Co, agents, No. 187 Water street, New-York. Written communications (post-paid) will be faithfully attended to.

March 1—3t*.

TO BREEDERS OF FAST HORSES.

THE celebrated Stallion Colt "ANGLO-SAXON," will stand for the ensuing season, at the farm of *Josiah Crosby*, in North Andover, Mass. "Anglo-Saxon" was sired by the original Black Hawk, now owned by the Messrs. Hill, in Vermont. He will be four years old in July next. His color is a bright bay. He weighs a thousand pounds, and though not entirely broken to harness, has great speed and splendid action. He took the first premium at the last Fair of the Essex County Agricultural Society; and has been pronounced by amateurs a *perfect* animal. Like the rest of the "Black Hawks," he needs no encomium. Breeders are requested to examine and judge for themselves.

The "Lady Lawrence," a five years old chestnut mare, sired by Black Hawk, may be seen at the same stable. She can trot her mile in two minutes and forty seconds—has never been trained, and can be bought for $1000, if applied for immediately.

North Andover, March 1st, 1848.—2t*

A STOCK AND GRAIN FARM FOR SALE,

SITUATED in Darlington township, Beaver county, Pa., seventeen miles from the mouth of Beaver river, on the road from Beaver to Salem, and Boardman, Ohio, containing near 600 acres; is in two lots, near each other; is well watered, with eight never failing springs. The improvements are two brick and one square log houses. The mansion is in cottage style; is forty-two feet in in front; has sixteen apartments, including kitchens and cellars. A frame bank barn, with stone basement, 63 by 38 feet; the corner posts twenty-two feet six inches high. With ample granaries and stabling, and root cellar. Also hay and sheep houses, and sheds sufficient to shelter 900 sheep. A well selected orchard of apples, peaches, cherries and plums. All under fence except about thirty acres. It is well adapted to either grain, wool or dairy purposes. The title is indisputable. It is now well stocked with fine sheep, that will be for sale: for the character of the flock I refer to Mr. Samuel Lawrence of Lowell, Mass, or Messrs. Perkins and Brown of Springfield, Mass. For terms apply on the premises.

February 7th, 1848.—3t.* JOHN SMART.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.

Payable always in advance.